

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3661:

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TGATGTTTGA	TIAGCTCATA	AATACTAAAT	AATGTTTGTA	ACTTATAGTT	ACGTTTTTTG	60
GAATTAACGT	TGACATATTG	TCATTCASTT	TTCAATGTTT	ATTTTTCTTA	CCGACAAGAA	120
TTAATTATAC	ATTTTATTAA	CATTTAAGTC	AATAACTTTT	TTTATCTTGT	CCATTTTATT	180
TTTAAACCAA	AATTTGATTA	AAAACTGCC	TGGCAACGTT	CTACTCTAGC	GGAACGTAA	240
TTGACTACC	ATCGACGCTA	AGGAGCTTAA	CTTCTGTGTT	CGGCATGGGA	ACAGGTGTGA	300
CCTCCTTGCT	ATAGTCACCA	GACATATGAA	TGTAATTTAT	ACATTCAAAA	CTAGATAGTA	360
AGTAAAAGTG	ATTTTGChTC	GCAACATTTT	ATTTTGATTA			400

(2) INFORMATION FOR SEQ ID NO: 3662:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 742 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3662:

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CGCTCAACGT	CTGCCCTTGT	AATGGCTTTT	GTAGAAATTC	TAACATAATA	ATTTCGAATG	60
CTATCATTGA	TGTITTC AAC	AGCTTGATGC	TTTTGTTCAA	GCTTTTGTAT	CAATTTTTTA	120
TGTCCTTTTG	TAATTCGCG	AATGCTCTCA	AACATTGATA	AGACAATCTG	ACCCACATTT	180
TGTAATCTTT	TTTGAGTTTC	TTGTAATGCA	ACACCAGGTG	CGTGATAAAC	AAGATCTTTG	240
TTTAAGTGCT	GAGGTTTATA	GTCATCAGCA	ATATCTTTAC	CTGGGACAAG	CTTTGTAAACA	300
ATCCATGCTA	AACCTGCTAC	AAATGGTAAT	TGAATCAAAG	TATTTGTTAT	GTTGAAGATA	360
CCATGTGATA	CTGCAATCGT	CATCGCTGGT	TTTAAGTGCC	ATAAATCTTG	TAACAAACTA	420
ATCAATGAA	TCACAACTGG	CAAGAAAATT	GTGAAGATAA	TTACCCCGAT	TAAGTTAAAG	480
ATGACGTGTA	CAAGCGCCGC	ACGTTTTCGA	GCGATTGAGC	CGGCTAAACT	AGCTAAGATA	540
GCTGTAATCG	TGGTACCAAT	GTTATCGCCT	AGTAACACAG	GGATKGCTGC	GTTTAAAGTA	600
ATTAAATCTT	GTGATAAAAA	TTCTTGTA AA	ATACCAATCG	TGCACTTGA	ACTTTGAACT	660

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AGCAITAAAT TGGCTTnAAA TC

742

(2) INFORMATION FOR SEQ ID NO: 3663:

- 5 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3663:

15 ATGAATTCAA GCTTATTAA AACTCTTAT TCACCGGTT TTGCTTGGTA AAATCTATAT 60  
 TTACTTACT TATCTAGTTT TCAATGTACA ATTCTTTTT AGTCAAGCGC TCGCATACTG 120  
 CTTTATTTTC AAAAAATCAA ATGCTCATTT ACAAAGTAA ACTCCGCTTT AATTTTTCCT 180  
 20 AATGCATTGT CTAACAACCG CTTTCTTTAA AAAGAATAGA TTGTCAAGCG CTCGCATAAG 240  
 CAATATCACT TTAACAAAA AATATTGAA TGTAAATAA ACATTCAnAA CTGAATACAA 300  
 TATGTCACGT nATTCGCGAT CTTCTGAAGA AGATGTTCCG AATATATCCT TAGAAAGGAG 360  
 25 GTGATCCAGC GCACCTTCC GATACGGGCT ACCTnGnAC 400

(2) INFORMATION FOR SEQ ID NO: 3664:

- 30 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 636 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3664:

AACTAATAGT TCACTTTAC TTTTTTCTTT TTCAATTATTA TCATTATTT TTTCACCGCC 60  
 40 AAAACGAATT TCATGATGTT AATTAAATG TTCTATGACA AAATTAAGCA ACGATGTTT 120  
 ATATTTATTT CCAACTATGT CTAGATTAAA TTCTAAAAA TAKACATCAT TTAAGAGGAG 180  
 CTGGGACAT AAATCAATGT CCTAGGGTCT ATAATATTAT AATGCTAGTA GTTGACTGAA 240  
 45 TGAAATGCG CTGCAACAA GCTTTTTTCA ACTCTAGTCA GGGGCCCAAC CACAGAGAAT 300  
 TTCGAAAGA AATTCTACAG GCAATGCGAG TTGGGTGTG GGGCCCAAC CAGAGAATT 360  
 CGAAAGAAA TTCTACAGGC AATGCGAGTT GGGGTGTGG CCCCAACACA GAGAAATTCG 420  
 50 AAAAGAAAT CTACAGGCAA TGCGAGTTGG GGTGTGGGCC CCAACATAGA GAAATGGAAT 480  
 CCCAaTTTCT ACAGACAATG CAAGTTGGCG GGGCCCAAC ACAGAAGCTG ACGAAAAGTC 540

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TACAATAATG nGCAAGTTGG CGGGGnCCCC AACACA

636

(2) INFORMATION FOR SEQ ID NO: 3665:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 404 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3665:

TATCAITTCG TGTGCTAA ACAACAGCAT GTATGCCATT CATAACACCT TTATTATGTG 60  
 TTGCTGCACG ATGAATATCT ACTTGGGCCA ATACAGAAGC ACGTTCCATT CGTTTGGCAA 120  
 CCTCTTCTCC AGTTCTCTCG CCCCTTGCTA AATCTTTAAC ATCAATTTTCG CCTTGAACCT 180  
 TAACAACGGA CGCTGTTGCA TGATTGGATA AAATACTCAT TAAAATGTCG CTTTGGGAAA 240  
 tTCATTTTTT AAAAATGCAG TTATGGCCTC TAAAATCGTA TTAAGCATAT TAGCGCCCAT 300  
 AGCATCTTTC GTATCAACAA ATACTTTTAA AGATAGTAAC TGtTGtTCAG G:AAATGTakC 360  
 mAtCGGTATA CGtTGGTAAC CACCACCACG CGCTTTAATA GGAA 404

(2) INFORMATION FOR SEQ ID NO: 3666:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3666:

GTGGTTCAG TAGCAATTAT TGAACGATAT TAGGCTATCT AGTCGGCATA TTTGTAAAC 60  
 AAGATCCAAT TAAATATCAA CAGGAATAAC GAATAATATA AAAGAGGTTG GGACATAAAT 120  
 CCTAAAAAA ACAGCAGTAA GATAATTTTC AATTAGAAAA TATCTTACTG CTGTTCTCTA 180  
 TTTATACAAAT ACTTCGTATT GAATGGCTTC GCTTTCCTAG GGTGCCGTCT CAGCTCGGT 240  
 CTTCGACTGG CACTGCTCCC TCAGGAGTCT CGCCATTAAAT ACTACGTATT AACGTGTAAAT 300  
 TTTACTTTGA AATACTTTAA AAAAATAAGA CACTTTGCC CAACTTGACA TAAATGTAAA 360  
 ATTCAATAAA ATAAATTTCT GTGTTGGATC CCTnCGTATA 400

(2) INFORMATION FOR SEQ ID NO: 3667:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3667:

	CCAACAAATC TGTCTGTCGC ATCGCCTTTG TCGTTCCAAA TAAATATGTA CAAACGAATC	60
10	CACCAGCATA CGCnCCAAGT AATCCTGCAA TATAACCTAA ATACATATTA TCTGAGATTA	120
	ATGGTAATAG TGACACACCA CTTGGGCCTA TTGCTTTGGC ACCAATATGT CCAATTCCAC	180
	CTATTACAGC GCCACCAATA CCACCACCAA TACAAGCAGT TAAGAAAGGT CGACCTAATG	240
15	GCAAGTCAAC ACCATAGATT AATGTTCTC CGATACCTAG GGAACCAAC TGGCAATGCA	300
	CCTTTTAAAG TATTACGTAA TGTGTGTTG CGGTTTACAT CTACCCAAA GTGCTAATGC	360
20	GGGCACCTAC TTGGTCCCAG CACCAGCCAT CGCTGCAATT	400

(2) INFORMATION FOR SEQ ID NO: 3668:

	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 400 base pairs
25	(B) TYPE: nucleic acid
	(C) STRANDEDNESS: double
	(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3668:

	ACTAAGATGT TTCAGTTCTC CGGGTGTGCC TTCTGATATG CTATGTATTC ACATATCGAT	60
	AACATGACAT AACTCATGAC TGGGTTTCCC CATTGCGAAA TCTCTGGATC AAAGCTTACT	120
35	TACAGCTCCC CAAAGCATAT CGTCGTTAGT AACGTCCTTC ATCGGCTTCT AGTGCCAAGG	180
	CATCCACCGT GCGCCCTTAA TAACTTAATC TATGTTTCCA TCCTACAGGA AACGCGTTAT	240
40	TAATCTTGTG AGTGTTCITT CGAACACTAG CGATTATTTT TTATGAATTC AAGCTTATTT	300
	AAAACCTTTT ATTCACTCGG TTTTGCTTGG TAAAATCTAT ATTTTACTTA CTTATCTAGT	360
	TTTCAATGTA CAATTTCTTT TTAGTCAAGC GCTCGCATAA	400

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(2) INFORMATION FOR SEQ ID NO: 3669:

	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 400 base pairs
	(B) TYPE: nucleic acid
50	(C) STRANDEDNESS: double
	(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3669:



5 GAGCGCTACT TACTGGnAGG CGCTGGTGGG ATACTACCCT AGCTGTGTTG GCTTTCTAAC 120  
 CCGCACCCTAT TATCGTGGTG GGAGACAGTG TCAGGCGGGC AGTTTGA CTG GGGCGGTGCG 180  
 CTCCTAAAAG GTAAAGGAGG CGCTCAAAGG TTCCCTCAGA ATGTTGGAA ATCATTCTATA 240  
 GAGTGTAAAG GCATAAGGGA GCTTGACTGC GAGACCTACA AGTCGAGCAn GGTCGAAAGA 300  
 10 CGGACTTAGT GATCCGGTGG TTCCGCATGG AAGGGCCATC GCTCAACGGA TAAAGAGTAC 360  
 CCCGGGGGAT AACAGGCTTA TCTCCCCCAA GAGTTCACAT 400

(2) INFORMATION FOR SEQ ID NO: 3670:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3670:

25 ATACTTTTACA TTCTCGTTT CGTCAGATTC AAACGTTTTT ACTTCGCCAA GCCATCTTTT 60  
 TTGTGTGTTG CTTTATTTT GACGTTTTAG ACATAAAAAA AGAGACCTTG CGGTCTCAAT 120  
 GCGGCTCATC GCATCCACTT TTTGCCTGGC AACGTTCTAC TCTAGCGGAA CGTAAGTTG 180  
 30 ACTACCATCG ACGCTAAGGA GCTTAACTTC TGTGTTCCGC ATGGGAACAG GTGTGACCTC 240  
 CTTGCTATAG TCACCAGACA TATGAATGTA AATTATACAT TCAAACTAG ATAGTAAGTA 300  
 AAAGTGATTT TGCTTCGCAA AACATTTATT TTGATTAACT CTTCCGATCG ATTAGTATTC 360  
 35 CGTCAGCTCC ACATGTCACC ATGCTTCCAC CTCGGAACCT 400

(2) INFORMATION FOR SEQ ID NO: 3671:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3671:

CACCCGAAGA TATTGCTCAG ACAAAGTCAT CATATACAGG AAAGTATTTA AAAGAAGTAC 60  
 50 TTGAACGAGA TAAACAAAT ACTGAAGATA AATAAGATTA AAAGAAGTGA AGGATGTTAT 120  
 AAATTTATCC TTGCTTCTT TTTATTAATT TAGTAATGAA TAGTAGAAAG AAAAGATGCG 180  
 TAAAAAAGAA TATGTTAAGA TAGGGTCAAT CTAGAGTAGT TAAACATAAA TCGAACTGGG 240

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TIAGCCACAG CTATTGTGTA CTTAAAAATA GGAATGCATG AGTGCACCA nAGGnAGAAT 360  
 ACTAATTICC AAAGAAAAG TATTCTTAT GTTGGGGCCC 400  
 5 (2) INFORMATION FOR SEQ ID NO: 3672:  
 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 461 base pairs  
 (B) TYPE: nucleic acid  
 10 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3672:  
 15 TGGACCTGTA AAAGGAGACT CGATTGTAGA AAAAGAAGAG ATTCCATTCG AGAAAAGACG 60  
 TAAATTTAAT cCTGATTTAG CmCCaGGGAC aGAAAAAGTA mCmAGaGAAG GACaAAAAGG 120  
 20 TGAGAAGACA ATaACGACAC CAACACTAAA AAATCCATTA ACTGGAGTAA TTATTAGTAA 180  
 AGGTGAACCA AAAGAAGAAA TCACAAAAGA TCCGATTAAAT GAATTAACAG AATACGGACC 240  
 AGAAACGATA ACACCAAGTC ATCGAGACGA ATTTGATCCG AAGTTACCAA CAGGAGAGAA 300  
 25 AGAAGAAGTT CCAGGTAAC CAGGAATTAA GAATCCAGAA ACAGGAGACG TaGTTAGACC 360  
 ACCGTCGAT AGCGTAACAA AATATGGACC TGTAAAAGGA GACTCGATTG TAGAAAAAGA 420  
 30 AGAGATTCCA TTCAAAAGCT AAATTTAATC CGGATTAGC A 461  
 (2) INFORMATION FOR SEQ ID NO: 3673:  
 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 35 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3673:  
 40 CTTATGAATT CAAGCTTATT TAAAACTCTT TATTCACCTG GTTTGCTTG GTAAAATCTA 60  
 TATTTTACTT ACTTATCTAG TTTTCAATGT ACAAATAATG GTGGAGACTA CGGGATCGA 120  
 45 ACCGCTGACC TCCTGCGTGC AAAGCAGGCG CTCTCCACG TGAGCTAAGC CCCCAAAAGAG 180  
 GTATTAATTT AATGGGGGGC CTAAGTGGAC TCGAACCAAC GACCTCACGC TTATCAGGCG 240  
 50 TGCCTCTTAA CCAGCTGAGC TATAGGCCCA TTAATTTGAA TGAACAAACA TTCAAAACCTG 300  
 AATACAATAT GTCACGTTAT TCCGCATCTT CnGAAGAAGA TGTCCGAAT ATATCCTTAG 360  
 AAAGGAGGTG ATCCAGCCGC ACCTTCCGAn ACGGCTACCT 400  
 55

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3674:

ACATGAAGAC TTAATTGAAG AATTATTAGG TATGGAAATT GAAGATGAGA TGGATAAAAA 60  
 GGAAAAAGAA AAACCTTCTC AACAGCAAT TCAATTTCAA CAACGGAAAA ATCGCAACGT 120  
 ATCTATATAA GGAGCGAACA GCTATGTGG AATAAGAATC GACTTACTCA AATGTTAAGT 180  
 ATTGAATATC CAATTATACA AGCAGGTATG GCAGGAAGTA CGACACCGAA ATTAGTTGCA 240  
 TCAGTAAGTA AACAGTGGTG GGTAGGCAC AATAGGCGG GTTACTTTAA TACGCGCCAA 300  
 TTGGAGGATG GAnATnGATT ATGTACGCCA TTAACGTCAA ATTCTTTGG CGTAAATGTC 360  
 TTTGTACCAA GTCAACAATC ATATACCACT AGTCCAAAT 400

(2) INFORMATION FOR SEQ ID NO: 3675:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3675:

AGCTAGGCCG GCAATATGTA AGAATAAATG GTGGAGAATG ACGGGTTCGA ACCGCCGACC 60  
 CTCTGCTTGT AAGGCAGATG CTCTCCGAGC TGAGCTAATT CTCCGATTAA AAATCGCTG 120  
 GCACCGTTCT ACTCTAGCGG AACGTAAGTT CGACTACCAT CGACGCTAAG GAGCTTAACT 180  
 TCTGTGTTGG GCATGGGAAC AGGTGTGACC TCCTTGCTAT AGTCACCAGA CATATGAATG 240  
 TAATTTATAC ATTCAAACCT AGATAGTAAG TAAAGTGAT TTTGCTTCGC AAAACATTTA 300  
 TTTTGATTAA GTCTTCGTG TTAGTATTCG TCAGCTCCAC ATGTCACCAT GCTTCCACCT 360  
 CGGACCTATT AACCTCATCA ACCTTGAGGG nTCTTATAAA 400

(2) INFORMATION FOR SEQ ID NO: 3676:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3676:

5 TGGACAATGG TAGGAGAGCG TTCTAAGGGC GTTGAAGCAT GATCGTAAGG ACATGTGGAG 60  
 CGCTTAGAAG TGAGAATGCC GGTGTGAGTA GCGAAAGACG GGTGAGAATC CCGTCCACCG 120  
 ATTGACTAAG TTTCAGAGG AAGGCTCGTC CGCTCTGGGT TAGTCGGGTC CTAAGCTGAG 180  
 10 GCCGACAGCG TAGGCGATGG ATAACAGTTG ATATTCCTGT ACCACCTATA ATCGTTTTAA 240  
 TCGATGGGGG GACGCATAGG ATAnGCGAAn GTGCGATTGG ATTGCACGTC TAAGCAGTAA 300  
 GGCTGAGTAT TAGGCAATC CGGTACTCGT TAAGGCTGAG CTGTGATnGG GAGAAGACAT 360  
 15 TGAGTCTTCG AGTCGTTGAT TTCACACTGC CGAGAAAAGC 400

(2) INFORMATION FOR SEQ ID NO: 3677:

(i) SEQUENCE CHARACTERISTICS:

20 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3677:

25 AAAGCGCCAC ATGGTGCCAA GTCTGGAGTT AATCCAGCAA TTGCTTGTTT TAAGCTATTA 60  
 TATTTTCTTT CTACTTTTGT TTTTCTGCG GCAATTGTGT GGTGAGTCGC ATCACCATTG 120  
 30 TTAATAACAT TTTGTGCATT TGTGATTCT GTTGACCCG CACGTTTAGC ATTTTCATAT 180  
 GCTTGGATTG ATGATTGTGT CATACCATCA GTAGTTACTG ATTTATTGAT TTCITCATCA 240  
 35 AGTTTGCTCT TAGCAGTTTT TAAAGCACTA TTATCAGCTA AAGGTACTAA TTGGATTAAAT 300  
 TGCTTCGTTT AATGCTCAT TGACACGATT TACATTGTGT AACGCAGATT GCATTCTTTG 360  
 TACTGTTCTT AATGGGCTTT TGGAATAATA GCAATTAGCGC 400

(2) INFORMATION FOR SEQ ID NO: 3678:

(i) SEQUENCE CHARACTERISTICS:

45 (A) LENGTH: 648 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3678:

50 ACAGTCAATT GnTCTACCAA TTGAGCTAGG CCGGTAAGA AATGGTTCCA GGACAGAGTC 60  
 GAATGCCGAC ACATGGAGCT TCAATCCATT GCTCTAACCA ACTGAGCTAC TGAACCATAA 120

AGCGGTGTTA ACCGCTACAC TACGAGACCT ATAAAAATATT GCGGGAGGCG GATTGTAACC 240  
 ACCGTACTTC GGGTTATGAG CCGGACGAGC TACCGAACTG CTCCATCCCG CGATAATAAA 300  
 5 AAATAATGGC GGAGGAAGAG GGATTGGAAC CCCC CGGCC CGTTAAGGCC TGTCCGTTTT 360  
 CAAGACCGAT CCGTTACGCC GGACTTGGGT ATTCTCCCAT TATTATAGGT AAATCGCTAT 420  
 10 TAATTATAAA ATTAATATGC GGTCTCGACG GGAATCGAAC CCGCGATCTC TGCCTGACAG 480  
 GCAGGCGTGT TAAyCGCTAC ACTACGAGAC CATTAGTAAA ACGGAGGAAG AGGGATTCTGA 540  
 ACCCCGCGGA GCCGTTAAGC CCCTGTCCGT TTCAAGACC GATCCCTTCA GCCGGACCTT 600  
 15 GGGGTATTCC TCCAAAATTA TATGGGACCT TGCAGGACTC GAACCTGC 648

(2) INFORMATION FOR SEQ ID NO: 3679:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3679:  
 CTGATCCCGT TGTGCTTCAC ACCCGATAGA TAGGGATTTA CAGATAAAIT CAGGTCTCTT 60  
 30 CCACGTCATA TTTGGACCA TCGAAAATTC GGGTTCTCAA ATCATCGAAC ATAACAAAAG 120  
 AAGCTAAGCA ACATGTAGGC CGTTGTCACT TAACCTCTTG TTTTCCGAT GACAGCTTCT 180  
 ATTTAGAGAA TGTCATGATT ATTTTATATT CACTTCAATG TTATCAATAT TAGTGCCATC 240  
 35 TATGACATCT GCCATGCGAT TTTCTTGTA TTTTGTGTC AATTCAAACG TGACTTTTCC 300  
 ACCGTTTTTC ATTTTAATAA CAATTTTACC TGAACCAACG TTACCGTACA GATTATTTT 360  
 TTCAATAAGT TGTTTTCATC ATTTAAAATC AAGTTCTTTC 400

(2) INFORMATION FOR SEQ ID NO: 3680:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

50 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3680:  
 TCAATTGCGC TCATCGCATT CATTCTTGT CTAGCAACGT TCTACTCTAG CGGAAnTAAG 60  
 TTAGCTACCA TCCTCGCTAA GAACCTTCT TGACTGTGA CAATCGCTTG CTCTTTTCTT 120

TCGTGAGATT CAAACGTTTT CACTTCGCCA AGCCATTTTT CTTGTGTTT ACTTTTTATT 240  
 5 TTGACGTTTT AGACATAAAA AAAGAGACCT CACGGTCTCA ACTTGCCTGG CAACGTTCTA 300  
 CTCTAGCGGA AGTAAAGTGG CTACCATCGT CGCTAAAGAC CTTTCTTGAC TTGTGACAAT 360  
 CGCTTGGCTT CTTCTCTCTC CTTCGGnTCT CGGCTTACTC 400

10 (2) INFORMATION FOR SEQ ID NO: 3681:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3681:

20 TCTTCTCTCT CCTTCGGCTC TCGCTTACTC ATTTAGTCTT ACTAACTGC TTGCGCTCTT 60  
 TTCTCGTTTC GTCAGAITCA AACGTTTCA CTTGCGCAAG CCATTTTCTT TTGTGTTTAC 120  
 TTTTATTTT GAGCTTTTAC ACATAAAAAA AGAGACCTCA CGGTCTCAAC TTGCCTGGCA 180  
 25 ACGTTCTACT CTAGCGGAAC GTAAAGTTGGC TACCATCGTC GCTAAAGACC TTTCTTGACT 240  
 TGTGACAATC GCTTGCTTCT TTCTCTCTCT TCGGCTCTCG CTTACTCAIT TAGCTCTACT 300  
 30 AAACTCGTTG CGCTCTTTTC TCGTTTTCGTC AGATTCAAAC GTTTTCACTT CGCCAAGCCA 360  
 TTTTCTTTG TGGTTTACTT TTTATTTTGA CGGTTTAGGC 400

(2) INFORMATION FOR SEQ ID NO: 3682:

- 35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 414 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3682:

45 TTGAACATGT TGAATCTAAT GAAATCTTGT TTGTCGCTCT AGTTGAAGAG AACGCGTTG 60  
 AGCATGAAGG TGAATTAGAT CGCTATCCAT TAGCTAAATT TAAACGTTCA AACTCAGGTA 120  
 CATGTTACAA CCAACGTTCA ATCGTTGCAG TTGAGATGT TGTGAGTAT AACGAGATT 180  
 50 TAGCAGATGG ACCATCTATG GAATTAGGAG AAATGGCAIT AGGTAGAAAC GTATAGTTGG 240  
 TTTCTAGACT TGGGACGGTT ACAACTATGA GGATGCCGTT ATCATGAGTG AAAGACTTGT 300  
 GAAAGATGAC GTGTATACCT CTATTCATAT TGAAGAGTAT GAATCAGAAG CACGTGATAC 360

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## (2) INFORMATION FOR SEQ ID NO: 3683:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3683:

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TTGGAATTTC TCCGTACCC TCAGTTCATC CGCTCACTTT TCAACGTAAG TCGGTTCCGGT      60
CCTCCATTCA GTGTTACCTG AACTTCAACC TGACCAAGGG TAGATCACCT GGTTCGGGT      120
CTACGACCAA ATACTAAACG CCTATTTCAG ACTCGCTTTC GCTACGGCTC CACATTACT      180
GCTTAACCTT GCATCAAATC GTAACCTGCC GGTTCATTTC ACAAAAGGCA CGCCATCACC      240
CATTAACGGG CTCTGACTAC TTGTAAGCAC ACGGTTTCAG GTTCTATTTC ACTCCCTTTC      300
CGGGGTGCTT TTCACCTTTC CCTCACGGTA CTGGGTTTAC TATCGGTCAC TAngAGAGTA      360
TTTAAACCTT AngAGATGGT CCTCCAGAT TCCCGACGGG      400

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## (2) INFORMATION FOR SEQ ID NO: 3684:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 528 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3684:

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GATnTATGAT GAAAAATAT CTGACTGCTG TTTCACTTTT TATAAGACTT CTGAATGTCT      60
TCATTATATC TTCTAGTCAC AGATTnAAAT AATCAAAAGT GCACATTATT AAAATATCAA      120
TTTCACACTC AATGCGGCTC ATCGCATTC A TTCTTGTCT AGCAACGTTT TACTCTAGCG      180
GAACGTAAGT TAGCTACCAT CCTCGCTAAG AACCTTTeTT GACTTgTGAC AATCGCTTGC      240
TTCTTTTCCTC TCCTTCGGCT CTGCTTACT CATTTAGCTC TACTAAACTC GTTGCGCTCT      300
TTTCTCGTTC GTGCAGATTC AAACGTTTTT ACTTCGCCAA GCCATTTTTC TTTGTGTTTA      360
CTTTTTTATT TGACGTTTTT GACATAAAAA AAGAGACCTC ACGGTCTCAA CTTCGCTGGG      420
CAACGTICTA CTCTAGCGGA ACGTAAGTTG GCTACCATCG TCGCTAAAGA CCTTCTTGA      480
CTTGAGACAA TCGCTTGCTT CTnTCCTCTC CTTCGGCTCT CGGTTACT      528

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## (2) INFORMATION FOR SEQ ID NO: 3685:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3685:

10 AAATTATGGT CGATTCCGAA TGATTTAAGA GGGAnCATGG ATGCGAGTGA ATTCCGTAAT 60  
 TACATTITAG GCTTGATTMT CTATCGCTTC TTATCTGAAA AAGCCGAACA AGAATATGCA 120  
 GATGCCCTGT CAGGTGAAGA CATCACGTAT CAAGAAGCAT GGGCAGATGA AGAATATCGT 180  
 15 GAAGACTTAA AAGCAGAATT AATTGATCAA GTGCGTTACT TCATTGAGCC ACAAGATTTA 240  
 TTCAGTGGCA TGATTCTGTA AATTGAAACG CAAGATTTCG ATATAGAGCA TCTAGCGACG 300  
 GCGATTGGCA AAGTTGAAAC ATCTACATTA GGTGAnGAAA GTGAAAATGn CTTTATCGGG 360  
 20 CTGTTCAAGC ATATGATTG GAGTTCAACG CGGCTAGGTA 400

(2) INFORMATION FOR SEQ ID NO: 3686:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 403 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3686:

TTAAATTATT GGTCTATCGG TTCTTGGGGT GGCCATTGTA TCTGTTCACCT CTTCGGTGGT 60  
 35 GCAGTTGCGA CAACTATGGG TTGGAGATGG ATTTTCATCT TCTCAATTAT CGTTGCCGTA 120  
 CTTTCAATGT TACTCATCAA AGGACGCCT GAAACGAAAT CAGAAATTAC CAATACACAT 180  
 AAATTGACG TTGCAGGGCT AATTGTTCTA GTAGTTATGT TGCTAAGTTT AAACGTTGTC 240  
 40 ATTAATAAAG GTGCAGCACT TGATTACACA TCATTATGGT TCITTTGGTTT GATTGCAATC 300  
 GTAATTGTAG CATTCCTTAT TTTCTTAAAT GTTGAGAAAA AAGTAGATAA TCCACTTATT 360  
 45 GATTTTAAAT TATTgAAAA AAACCATATA CAGGTGCAAC GGT 403

(2) INFORMATION FOR SEQ ID NO: 3687:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 449 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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TATGAGCCCG ACGAGCTACC GAACTGCTCC ATCCCGCGAT AATAAAAAAT AATGGCGGAG 60  
 GAAGAGGGAT TCGAACCCCG GCGGCCCGTT AAGGnCTGT CGGTTTTCAT GACCGATCCC 120  
 5 TTCAGCCGGA CTGGGTATT CTCTCATAT TATAGGTAAA TCGTATTAA TTATAAAATT 180  
 AAATGGCGGT CTGACGGGA ATCGAACCCG CGATCTCCTG CGTGACAGGC AGGCGTGTTA 240  
 ACCGCTACAC TACGAGACCA TTAGTAAAAC GGAGGAAGAG GGATTGGAAC CCCCCTGAGC 300  
 10 CGTTAAGCCC CTGTCGGTTT TCAAGACCGA TCCCTTCAGC CGGACTTGGG TATTCTCTCA 360  
 AAATTATATG GACTTGCAG GACTCGAACC TCGACCGAA CGGTATGAGC CGTAGCnCTA 420  
 15 ACCACTGGGC TAAAGTCTTA ATATAATT 449

(2) INFORMATION FOR SEQ ID NO: 3688:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 20 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3688:

AAAACGTCGT AATATGCAA TTGAAGGTGC CAAGGTTGTT ATTCAAGGTT TcnATAATGC 60  
 CGGAAGTTTC TTAGCTAAAT TCTTATATGA TTTAGGTGCA AAAATTGTAG GTATCTCTGA 120  
 30 TGCTTACGGT GCATTACACG ATCCAAATGG CTTAGATATA GATTATTATAT TAGACCGTCG 180  
 AGATAGTTTT GGTACGGTAA CAAATTTATT TGAAGAAACA ATCTCAAATA AAGAATTGTT 240  
 35 TGAATTAGAT TGTGACATTT TAGTACCAGC GGCTATTICA AACCAAATTA CAGAAGACAA 300  
 TGCACATGAT ATTAAGCTA GTATCGTTGT TGAAGTGCT AATGGACCTA CAACACCAGA 360  
 AGCAACACGT ATTTTAACTG AACGTGGTAT ATTATTAGTT 400

(2) INFORMATION FOR SEQ ID NO: 3689:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 45 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3689:

CACGCTTATC AGGCGTGCAG TCTAACACAGC TGAGCTATAG GCCCATTAAT TTGAATGAAC 60  
 AAACATTCAA AACTGAATAC AATATGTCAC GTTATTCCGC ATCTCTGTAA GAAGATGTTT 120

CGACTTCACC CCAATCATT GTCCACCTT CGACGGCTAG CTCCTAAAAG GTTACTCCAC 240  
 CGGCTTCGGG TGTTACAAAC TCTCGTGGT TGACGGGCGG TGTGTACAAG ACCCGGGAAC 300  
 5 GTATTCACCG TAGCATGCTG ATCTACGATT ACTAGCGATT CCAGCTTCAT GTAGTCGAGT 360  
 TGCAGACTAC AATCCGAAC TGAACNACT TTATCGGGAA 400

(2) INFORMATION FOR SEQ ID NO: 3690:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 553 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3690:

20 GChGGGTTTT AGGCCCAATC GGTACCCCC nTTCATAAA TGGTGCCCGG CCAGAGGACT 60  
 TGAACCCCC AACTTACTGA TTACAAGTCA GTTGCTCTAC CAATTGAGCT AGGCCGGCTA 120  
 AGAAATGGTT CAGGACAGAG TCGAACTGCC GACACATGGA GCTTCAATCC ATTGCTCTAC 180  
 25 CAACTGAGCT ACTGAACCAT AATAAAAATG TAATGATGGC GGTCTGACG GGAATCGAAC 240  
 CCGCATCTC tGCGTGACAG GCAGGCGTGT TAACCGCTAC ACTACGAGAC CTATAAAAAT 300  
 TTGCGGGAGG CGGATTTGAA CCACCGaCTt CGGGTTATGA GCCCGACGAG CTACCGAACT 360  
 30 GCTCCATCCC GCGATAATAA AAAATAATGG CGGAGGAAGA GGGATTGAA CCCCCCGGC 420  
 CCGTTAAGGC CcTGTCGGTT TTCAAGACCG ATCCCTTCAG CCGACTTGG GTATTCCTCC 480  
 ATTATTATAG GTAnATCGCT ATTAAATTATA AnATTAAAAA GCGGTCTCG ACGGGAATCG 540  
 35 AACC CGGA TCT 553

(2) INFORMATION FOR SEQ ID NO: 3691:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 45 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3691:

50 TCAATGGGC TCATCGCATC CATTtTTTGC CTGGCAACGT TCTACTTAG CGGAACGTAA 60  
 GTTGGCTACC ATGACGCTA AGAACCTTTC TTGACTTGT ACAATCGCTT GCTTCTTTCC 120  
 TCTCTTCGG CTCTCGCTA CTCATTAGC TCTACTAAAC TCGTTGCGCT CTTTCTCGT 180

TTTGACGTTT TAGACATAAA AAAAAGAGAC CTGCGGTCT CAATGCGGCT CATCGCATCC 300  
 ATTTTITGCC TGGCAACGTT CTACTCTAGC GGAACGTAAG TTCGACTAC CATCGACGCT 360  
 5 AAGGGAGCTT AACTTTCTGT GTTCGGGCAT GGGGAACAGG 400

(2) INFORMATION FOR SEQ ID NO: 3692:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 410 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3692:

TCGAATACGT TCATGAAGTA ATTTCTCTAT TCTACGACCA GAAAAATACAG ATTGAGTATA 60  
 20 TGCATATAAG ATGTTTTTAA CATCATTTTT GGATGATAGG ATGTTGCACC ACGATGATGT 120  
 CTGAATTCAT CGAAATCCTA TCAGGTATCG TTTCAACAAT TTCATTAACA TATCGCGAAA 180  
 TATCATTTTG AGAATTCCTA CGAATTTCTT ATTGGTAGTG TAAGTTGGGG TCATGTTATA 240  
 25 ATTTTATAC ATAAGGCACC TCTTTAATTT AGTTTAGTAG TATTTATTAA ATTATACGAG 300  
 GGACCAACA CAGAAATTC ATTTATTGaa ATTTTACATT TATGTGmCAA GTTGGGaAAA 360  
 ATGTCTTATT TTTTCAAAGT ATTTAAAGT AAAaTTACAT GTTAATACGT 410

(2) INFORMATION FOR SEQ ID NO: 3693:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 425 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3693:

ACTTCATATA ATTTATGAAA TAAACCTGTC AATTTTGAT TGATTATGCT TTGTGATTCT 60  
 TTTTATTCTT GCGTAATAAC GCTAAACCTA AAATGCTAAA TAATCCGCGC AACACATGTC 120  
 45 CGTTGTTTGT TGATTCTTCT CCACCTGTTT CAGTAGTTCA GATTTCCTTAG ATTGTGCTTT 180  
 TTTAGTTGGT ACCACTGCTT TAACCTTTTC ATTGATTCA ATAACAGGTG TTACTIONTT 240  
 ACCTGTTTCC ACTGTTTTAG AAGGTTTTTT AGGTTCTTCT TTAGCAGGTG GTaTTGGTTT 300  
 50 ACCAGGTTCA GTTGTACCT CTGGCGITGG CGGTGTGCT GTTTCGGCT CGCTTGGTAC 360  
 TTCTGGTGTC GGTGGTGTG GGTGTTmCC GGCTTCGCT GGTACTTCTG GGTGTTCCGT 420

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## (2) INFORMATION FOR SEQ ID NO: 3694:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3694:

GCATCGTTGC	CTTGGTAAGC	CGTTACCTTA	CCAAC TAGCT	AATGCAGCGG	GAGTCCATCT	60
ATAAGTGACA	GCAAGACCGT	CTTTCACCTT	TGAACCATGC	GGTCAAAATn	ATTATCCGGT	120
ATTAGCTACG	GTTTCCCGAA	GTTATCCCGAG	TCTTATAGGT	AGGTTATCCA	CGTGTACTC	180
ACCCGTCGCG	CGCTAACATC	AGAGAAGCAA	GCTTCTCGTC	CCGTTCCGTC	GACTTGCATG	240
TATTAGGCAC	GCGCCAGGT	TCCATCCTGA	GCCAGGATCA	AACTCTCCAT	AAAAATTATG	300
ATGTTTGATT	AGCTCATAAA	TACTAAATAA	TGTTTGTAAC	TTATAGTTAC	GTTTTTTGGG	360
AATTAACGTT	GGACATATTG	TCATTCCAGT	TTTCAATGTT			400

## (2) INFORMATION FOR SEQ ID NO: 3695:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3695:

ACCTAATATA	TAGACAGGTT	CATCACTTAA	TGACTTTGCA	AGTTCGGCAA	TGCTCTGTGC	60
GTCGCGTTTG	ACACGATAAT	CACTGTCAGG	GTTTGAAGCG	GAATCAGGGA	GTGGTTCAGT	120
TAACTCGCTT	TCTCATAAT	CACGACGATC	AACGGCTACA	ACAGTAAAAT	GGTCTTTTAA	180
CTGTTCTGCA	AGAGGCAGAA	AAATGTCTCC	GGTACCGTTT	GCACCAGGAA	TAAAGATGAG	240
CACGGGTCCT	TGTCGCACTT	GGTGGTATCG	TAAATTTAGCG	CCTTGTAATT	CTAAAGTTTC	300
CATATTCAAT	GACCTCCATT	TGTTAAATTGT	TAGGTGATAA	ACCTAATAAT	TTAGCACCAT	360
TGTGTATAAC	TTAATTTCnC	CTTTTCTCTC	ATCnGGTTAA			400

## (2) INFORMATION FOR SEQ ID NO: 3696:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3696:

5 TTCTTCTCT TCTCCGGGT ACTAAGATGT TTCAGTTCTC CGGTTGTGCC TTCTGATATG 60  
 CTATGTATTC ACATATCGAT AACATGACAT AACTCATGCT GGGTTTCCCC ATTCGGAAAT 120  
 CTCTGGATCA AAGCTTACTT ACAGCTCCCC AAAGCATATC GTCGTTAGTA ACGTCCTTCA 180  
 10 TCGGCTTCTA GTGCCAAGGC ATCCACGGTG CGCCCTTAAT AACTTAATCT ATGTTTCCAC 240  
 CATTTTTATA AGTCAAACGC TCACATACGG CTTCGTTTTT ATTATTTTAA ATGCTCATTT 300  
 ACATAAGTAA ACTCTGCTTT AAAATAATTT AACTCATTGT CTGCTAAACG TTTTCTTTTA 360  
 15 TAAAAAGATT TAAACGGGTT GATTAACTG TGAGTGTTCT 400

(2) INFORMATION FOR SEQ ID NO: 3697:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3697:

CACTTTAACC AAAAAATATT TGAATGTTAA ATAAACATTC AAAACTGAAT ACAATATGTC 60  
 30 ACGTTATTCC GCATCTTCTG AAGAAGATGT TCCGAATATA TCCTTAGAAA GGAGGTGATC 120  
 CAGCGGCACC TTCCGATACG GCTACCTTGT TACGACTTCA CCCCAATCAT TTGTCCCACC 180  
 TTCGACGGCT AGCTCCTAAA AGGTTACTCC ACCGCTCTCG GGTGTTACAA ACTCTCGTGG 240  
 35 TGTGACGGGC GGTGTGTACA AGACCCGGGA ACGTATTACG CGTAGCATGC TGATCTACGA 300  
 TTACTAnCGA TTCCAnCTTC ATGTAGTCGA GTTGACAGAT ACAATCCGAA CTGAGAACAA 360  
 CTTTATGGGA TTTGCTTGAC CTCGGGTTT CGCTnCCCTT 400

(2) INFORMATION FOR SEQ ID NO: 3698:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3698:

50 AAGGGAATCG AATTTCTTTT CTCTCTCTCC GGTACTAAG ATGTTTCAGT TCTCCGGGTG 60

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CCCCATTCGG AATCTCTGG ATCAAAGCTT ACTTACAGCT CCCCAGCAAGCA TATCGTCGTT 180  
 AGTAACGTCC TTGATCGGCT TCTAGTGCCA AGGCATCCAC CGTGCGCCCT TAATAACTTA 240  
 ATCTATGTTT CCATCTCTACA GGAAACGCGT TATTAATCTT GTGAGTGTTC TTTCGAACAC 300  
 TAGCGATTAT TTCTTATGAA TTCAAGCTTA TTTAAAACTC TTTATTCACT CGGTTGTGCT 360  
 TGGnAAAATC TATATTTTAC TTACTTATCT AGGTTTCAAT 400

(2) INFORMATION FOR SEQ ID NO: 3699:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3699:

TTTATGGCAT ACACGCATCA TAATACAGCC CAACACCACCT AATGGTGCCAG TTGCAAATCC 60  
 AAATCTCTCC GCTCCAAGCG CACATGCGTA CGCTACATCT TTACCAGTTA ATAACCTTACC 120  
 GTCTGTTTCT AACTTAACAC GACTTCTTAA GTCAATTAGT TTTAATGTTT GATGTGTTTC 180  
 TGCTAAACCA ATCTCCCAAG GAACACCGGC ATGCTGAATA CTCGTTTTGG GTGAAGCCCC 240  
 TGTAnCCCA TCGTAACCA TGAATGACAAT TTTATCTGCA AATGCTTTTG CCACCCGAGA 300  
 TGCAATGGTA CCAACACCTG TTTTCGAAAC TAAATTTACC GCGATATCTG CATCTTTATT 360  
 CGCATTTTTT AAATCATGTA TCAGTTGCGC TAAATCTTCT 400

(2) INFORMATION FOR SEQ ID NO: 3700:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3700:

CGACGTACCA TCGACGCTAA GGAGCTTAAC TTTCTGTGTG TCGCATGGG AACAGGTGTG 60  
 ACCTCCTTTG CTATAGTCAC CAGACATATG AATGTAATT ATACATTCAA AACTAGATAG 120  
 TAAGTAAAG TnATTTTGCT TCGCAAAACA TTTATTTTGA TTAAGTCTTC GATCGATTAG 180  
 TATTCGTCAG CTCACATGT CACCATGCTT CCACCTCGAA CCTATTAAAC TCATCATCTT 240  
 TGAGGGATCT TATAACCGAA GTTGGGAAAT CTCATCTCnG GGGGGGCTTC ATGCTTAGAT 300

GGTACACCAG AGGTATGTCC ATCCCGGTCC TCTCGTACTA

400

(2) INFORMATION FOR SEQ ID NO: 3701:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3701:

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AACCAAGCCC AATAATGGAC TGGCCGCTA ATAATAAAG CTCTAAAGT TGTATTTTAA 60

AAATAGTTCT TTAATTATA TACCACCAC ATTGGTGA GAACCTAAAA AAAAGCACTT 120

CCCAAAAATG GAAAGTGCA GTAGTAGCC ATAGAGGATT CGAACCTCTG ACCCTCTGAT 180

20

TAAAGTCAG ATGCTCTACC AACTGAGCTA ATGGCTTAA TGGCTGGCT AGCTGGATTTC 240

GAACCAACGA GTGACGGAGT CAAAGTCGT TGCTTACCG CTGGCTATA GCCCAATATA 300

TAGATGGTGG AGGGGGGCG AGTCGAAGT CCGAACCGA AGAGCGGnTT TACAGTCGCG 360

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CGCGTTTACG CAnTTCCGnTA CCCCTCCAGn TTATTCATAT 400

(2) INFORMATION FOR SEQ ID NO: 3702:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3702:

TTTAAGTCCT GTGCGTCTGC CAGTTCGCC ACCCCGGCAC TATAAAAATG GAGCAGAAGA 60

40

CGGGATTGCA ACCCGCGACC CCAACCTTGG CAAGGTTGTT ATTCTACCGC TGAAGTACTT 120

CTGCATATGC GGGTGAAGGG AGTCGAACCC CCACGCCGTA AGgTTAGATC CTAAGTCTAG 180

TGCGTCTGCC AATTCGGCCA CACCCGCAAA TGGTGAGCCA TAGAGGATTC GAACCTCTGG 240

45

ACCCCTCTGA TAAAAAGTCA GATGCTCTAC CAACTGAGCT AATGGGCTCT TCCATGGTGC 300

CGGCCAGAGG ACTTGAACCC CCCAACCTAC TGGATTACAA GTcAGTTGGC TCTACCAATT 360

GAnGCTAAGG CCGGCAATAT GTTAAGnATn AATGGTGGAG 400

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(2) INFORMATION FOR SEQ ID NO: 3703:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

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(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3703:

CAACTAATAA ATAGTGGCGG TGGAGGGGAT CGAACCCCGG ACCTCACGGG TATGAACCGT	60
ACGCTCTAGC CAGCTGAGCT ACACCGCCTT ATATAGTTTG TAAATAATAT GGTGGAKACT	120
AGCGGGATCG AACCGTGAC CTCCTGCGTG CAAAGCAGgC GCTCTCCAG CTGAGCTAAG	180
CCCCATAAT AATTACAGTA TATCGGGAAG ACAGGATTGC AACCTGCGAC CCCTTGGTCC	240
CAAAACCAAGT GCTCTACCAA GCTGAGCTAC TTCCCGTATA ATTAACGCGC CCGATAGGAG	300
TGGAACCCAT AAACCTCTTG ATCCGTAGTC AAACGCTCTA TCCAATTGAG CTAACGGGCG	360
CATATGTTTT TAATTGAAAT GGTGCCCGAG GACCGGAATG	400

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(2) INFORMATION FOR SEQ ID NO: 3704:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3704:

CTAACGCCTA CGCGTTACAT GAAAAACGGA GAACAAGCAG AACAAATTATT ACGTCAGCTT	60
ATAGAAAAAG ATGAAGCACT AGCTAAGTAT GTCATGGTTT GTGATGAAAC AGCTTGGTGG	120
TCATATATGG GTCAAGATAA TGATATTTTC AAAGATCAAT TAGGTCATCT AACTGTTGAG	180
CTAAGAAAGT ATCCCGAAGT GCTAGCCAAA AATGATACGC AACAGCTAGT GTCAATGGCA	240
GCATCTCGGG CAAATGATCG CACTTTATAT CAAATGATT GTGGAAAAGA TAATATTCT	300
AAAAATGATG TCATGACGTT ATTGGAAGAT ATCGGCAAG TCTTTTAA GGTAAACACTA	360
TCATTTATGC AATACGGCGC ATTACCCAGA GTTGCATGGT	400

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(2) INFORMATION FOR SEQ ID NO: 3705:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 478 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3705:

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TGA CGGGGAC CCGCACAAGC GGTGGAGCAT GTGGTTTAAT TCGAAGCAAC GCGAaGaACC 120  
 TTACCAATC TTGacATCCT TTGacAACTC TAGaGATAGA GCTTTCCCTC TCGGGGGTAC 180  
 5 AAAGTGACAG GTGGTGCA TG GTGCTGCA GCTCGTGCG TGAGATGTG GGTAAAGTCC 240  
 CGCAACGAGC GCAACCCCTA AGCTTAGTTG CCATCATTAA GTTGGGCACT CTAAGTTGAC 300  
 10 TGCGGTGAC AAACCGGAGG AAGGTGGGGA TGACGTCAA TCATCATGCC CCTTATGATT 360  
 TGGGgCTACA CACGTGCTAC AATGGACAAT ACAAAAGGGA GCGAAACCGT GAGTCAAGCA 420  
 AATCCCATAA AGTTGTTCTC AGTTCGGATT GTAGTCTGCA ACTCGACTAC ATGAAGCT 478

15 (2) INFORMATION FOR SEQ ID NO: 3706:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 20 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3706:

25 ATCTTAAGTC TTGGTGAAC CGTTTTGTAG AATTAAATAA TATTACAGAG CCGCTAGCAG 60  
 TAACGATCCA AACGAATTTA CCACCATCAC GTGGATTAGG ATCGAGTGCA GCTGTCGCGA 120  
 30 TTGCTTTTGT TCGTGCAAGT TATGATTTT TAGGGAAATC ATTAACGAAA GAAGAACTCA 180  
 TTGAAAAGGC TAATTGGGCA GAGCAAATG CACATGGTAA ACCAAGTGGT ATTGATACGC 240  
 AAACGATTGT ATCAGGCAAA CCAGTTTGGT TCCAAAAGG TCATGCTGAA ACGTGAAGAA 300  
 35 CTCAAAGTTT AGACGGCTAT ATGGTGTGTA TAGaACTGG TGTGAAAGGT TCACCAAGAC 360  
 AAGCAGTAGA AGATGTTCa TAAACTTTGG TGAGGACCCT 400

(2) INFORMATION FOR SEQ ID NO: 3707:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 45 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3707:

50 GTCGAACTGC CGACACATGG AGCTTCAATC CATTGCTCTA CCAACTGAGC TACTGAACCA 60  
 TAATAAAAAT GTAATnnTGG CGGTCTCGAC GGAATCGAA CCCGCGATCT CCTGCGTGAC 120  
 AGGCAGGCGT GTTAACCGCT AACTACGAG ACCTATAAAA TATTGCGGGA GCGGgATTG 180

TAAAAAATAA TGGCGGAGGA AGAGGGATTG GAACCCCGGC GGCCCGTTAA GGCCCTGTG 300  
 GTTTTCAAGA CCGATCCCTT CAGCCGGACT TGGGTATTCC TCCATTATTA TAGGTAATACT 360  
 5 GCTATTAATT ATAAATATA ATGGCGTCT CGACGGGAAT 400

(2) INFORMATION FOR SEQ ID NO: 3708:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3708:

GTTCGCCAT TAAAGCGTA CCAGCTGGG TTCAGACGT CGTGAGCAG TTCGTCCTT 60  
 20 ATCnGGGGTG GGCAGTAGAA ATTTGAGAGG AGCTGTCCTT AGTACGAGAG GACCGGGATG 120  
 GACATACCTG TGGTGTACCA GTTGTGTGTC CAACGGCATA GCTGGGTAGC TATGTGTGGA 180  
 CGGGATAAGT GCTGAAACAT CTAAGCATGA AGCCCCCTC AAGATGAGAT TTCCCAACTT 240  
 25 CGGTATAAG ATCCCTCAA GATGATGAGG TTAATAGGTT CGAGGTGGAA GCATGGTGAC 300  
 ATGTGGAGCT GACGAATACT AATCGATCGA AGACTTAATC AAAATAAATG TTTTGCGAAC 360  
 30 AAAATCCACT TTTACTTACT ATCTAGTTTT GAATGTATAA 400

(2) INFORMATION FOR SEQ ID NO: 3709:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 424 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3709:

AATTTTATGG GCCCTTTATG GACTTTATAT TmCCTAAAAA ACTATTAAGA AGTCTGAAA 60  
 AATTACATTT AGCAGTTGGA TTGTTCAACT TTATTAATGA TAAGTATGCA AATAATTTCA 120  
 45 CAGTGTGTTGC AGCAGGGGCA ATTATGATTG CAGTACCTAT AGCAATCGTA TTCTGTTCTT 180  
 TGCAACGCTA TTTAGTATCA GGTTTAAACA CAGGTGCGAC AAAAGGTTAG TTTGAAATTC 240  
 GGAGTGGGGC AGAATTGATA AAGAACCCT AATGACGATA AAGATTAAAA GGAGGACGTT 300  
 50 ATGATGACGA TTAAGTTGG AATCATTGGG TGTGGTGSTA TTGCGAATGG CAAGCACATG 360  
 CCAAGTTTAC AAAAAGTTGA AAATGTTGAA ATGATCGCAT TTGTGACGTG GACTTTTCGAA 420

## (2) INFORMATION FOR SEQ ID NO: 3710:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 559 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3710:

AGTGCTCTAC	CAAGCTGAGC	TACTTCCCGT	ATAATTAACG	CGCCCGATAG	GAGTCGAACC	60
CATAACCTCT	TGATCCGTAG	TCAAACGCTC	TATCCAATTG	AGCTACGGGC	GCATATGTTT	120
TTATTGAAAA	TGGTGCCGAG	GACCCGAATC	GAACCGGTAC	GTGATCACTC	ACCGCAGgAT	180
TTTAAGTCCT	GTGCGTCTGC	CAGTTCCGCC	ACCCCGGCAC	TATAAAAATG	GAGCAGAAGA	240
CGGGATTGGA	ACCCGCGACC	CCAACTTTGG	CAAGGTGTGa	TTCTACCGCT	GAACACTCTC	300
TGCATATGCG	GGTGAAGGGA	GTGGAACCCC	CACGCCGTAA	GeTkAGaTCC	TgAAgTCTAG	360
TGGCTCTGCC	AAITCCGCCA	CACCCGCAAA	TGGTGAGCCA	TAGAGGATTC	GAACCTCTCG	420
ACCCCTCTGA	TTGAAAAGTh	CAGATGCTCT	GACCAACTGG	AGCTAATGGC	TCTTCCCATG	480
GTGGCCGGCC	AGAAGGACTT	GGAACCCCA	ACCTGATGGA	TTTACAATTC	AGTTGGCTCT	540
AACCAATTG	AGCTAAGGC					559

## (2) INFORMATION FOR SEQ ID NO: 3711:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3711:

AACCTTTTAG	GAGCTAGCCG	TCGAAGGTGG	GACAAATGAT	TGGGGTGAAG	TCGTAACAAG	60
GTAGCCGTAT	CGGAAGGTGC	GGCTGGATCA	CCTCCTTTCT	AAGGATATAT	TCGGAACATC	120
TTCTTCAGAA	GATGCGGAAT	AACGTGACAT	ATGTGATTCA	GTTTGTGAATG	TTTGTTCATT	180
CAAAATTAATG	GGCCTATAGC	TCAGCTGGTT	AGAGCGCACG	CCTGATAAGC	GTGAGGTCCG	240
TGGTTCGAGT	CCACTTAGGC	CCACCATTA	TTTAATACCT	ATTTGGGGGC	TTAGCTCAGC	300
TGGGAGAGCG	CCTGCTTTGC	ACGCAGGAGG	TCAGCGGTGT	GATCCCGCTA	GTCTCCACCA	360
TTATTGTGAC	ATTTGAAAC	TAGATAAGTA	AGTAAAATAT			400

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3712:

5 TAGAATGAAC CGCGAGTTA CGATTTGATG CAAGGTTAAG CAGTAAATGT GGAGCCGTAG 60  
 CGAnnTCATG TCTGAATAGG GCGTTTAGTA TTTGGTCGTA GCCTGAAACC nmgTGATCTA 120  
 15 CCCITGGTCA GSTTGAAGTT CAGGTAACAC TGAATGGAGG ACOGAACCGA CTTACGTTGA 180  
 AAAGTGAGCG GATGAACTGA GGGTAGCGGA GAAATTCCTA TCGAACCTGG AAATAGCTGG 240  
 TTCTCTCGA AATAGCTTTA GGGCTAGCCT CAAGTGATGG ATTATTGGAG GTAGAGCACT 300  
 20 GTTTGGACGA GGGGCCCCCTC TCGGGTTACC GAATTCAGAC AAACCCGAA TGCCAATTTA 360  
 ATTTAACTTG GGGAGTCAGA ACATTGGGTG ATAAGTCCG 400

(2) INFORMATION FOR SEQ ID NO: 3713:

- 25 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3713:

35 TTTTAAATC TGATGTGAAA GCCCAGCGCT CAACCGTGAA GGGTCATTGG AAATCGGAAA 60  
 ACTTGAGTGC AGAAGAGGAA AGTGGAATTC CATGTGTAGC GGTGAAATGC GCAGAGATAT 120  
 GGAGGAACAC CAGTGGCGAA GGCAGCTTTC TGGTCTGTAA CTGACGCTGA TGTGCGAAAC 180  
 40 GTGGGGATCA nACAGGATTA GATACCCGGT AGTCCACGCC GTAAACGATG AGTGCTAAAG 240  
 TGTTAGGGGG TTTCGCCCCC TTAGTGTCTGC AGTAAACGCA TThAAGCACT CCGnCTGGGG 300  
 AGTACGnCCG CAAGTTGGAA ACTTCAAAGG AATTGACGGG GGACCCGCAC AAGCGTTGGG 360  
 45 AGCATGTGTT TTAATTTTGA AGCAACGGAG AGGAACCTGA 400

(2) INFORMATION FOR SEQ ID NO: 3714:

- 50 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 425 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

55

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3714:

5 AGGTAGGACT CGAACCTACG ACGATCGGT TAACAGCCGA TAGCTCTACC ACTGAGCTAC 60  
 TGTGGATTAA TATTATGCCT GGCAACGTTT TACTCTAGCG GAACGTAAT CGACTACCAT 120  
 CGACGCTAAG GAGCTTAACT TCTGTGTTG GCATGGGAAC AGGTGTGACC TCCTTGCTAT 180  
 10 AGTCACCAGA CATATGAATG TAATTTATAC ATTCAAAAT AGATAGTAAG TAAAAGTGAT 240  
 TTTGCTTCGC AAAACATTTA TTTTGATTAA GTCTTCGATC GATTAGTATT CGTCAGCTCC 300  
 cAtGTCACCA TGCTTCCACC TCGAACCTAT TAACCTCATC ATCTTTGAGG GATCTTATAA 360  
 15 CCGAAGTTGG GAAATCTCAT CTTGAGGGGG GCTTCATGTC TTAGCATTTT AGTCACCTAT 420  
 GCCCG 425

## (2) INFORMATION FOR SEQ ID NO: 3715:

20 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 25 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3715:

30 GTCCCTGCTG TTCTATCAT ATAAATGATA GATTCAATA GATTGTAGG TTTGTCATGC 60  
 CCAGTTACAA GTTGCCTTAT CGTAGACACT AACATTATA TGACTGGTAA TGTTCCTGTT 120  
 AATAAACTCA TACCAATCC TGGCATCTCT TGATCCGTAA ATTCTTTTTG TGCACCTAAC 180  
 35 GCTGAAATAT CGCCTTCTCG TGTATACGCA GACGGAATCA TTTTGTGTC ACTTTGTATA 240  
 ATATAGGCCC TGCAATGAGT GTACTGGAAT GGCAATAATC ATACCATACA GTAATACATC 300  
 TCCAACATTT GCCTTTAATT CTTTTCGAG ACTACCGTC CTGGGATGTG GTGGTAAAAA 360  
 40 GCCATGTGTC ACTGATAAAG CTGTTACCAT AnGTAGTCCT 400

## (2) INFORMATION FOR SEQ ID NO: 3716:

45 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 50 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3716:

55 TTATGAATTC AAGCTTATTT AAAACTCTTT ATTCACTGG TTTGCTTGG TAAAATCTAT 60

GCAATATCAC TTAAACAAA AAATATTGA ATGTTAAATA AACATTCAA ACTGAATACA 180  
 ATATGTGACA TTATCCGCA TCCTCTGAAG AAGATGTTC GAATATATCC TTAGAAAGGA 240  
 5 GGTGATCCAG CCGCACCTTC CGATACGGCT ACCTGTGTAC GACTTCACCC CAATCATTTG 300  
 TCCACCTTC GACGGCTAGC TCCTAAAAGG TTAATCCACC GGTTCGGGT GTTACAAAAT 360  
 10 GTTCGTGGTG TGACGGGGCG GTGTGTTACA AGACCCGGGA 400

(2) INFORMATION FOR SEQ ID NO: 3717:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 15 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3717:

AAAGGACGAC ATTAGACGAA TCATCTGGAA AGATAATTCA AAGAAGGTAA TAATCCTGTA 60  
 GTCGAAAATG TTGCTCTCT TGAGTGGATC CTGTTACGAC GGAGCACGTG AAATCCGTC 120  
 25 GGAATCTGGG AGGACCATCT CCTAAGGCTA AATACTCTCT AGTGACCGAT AGTGAACCAAG 180  
 TACCGTAGG AAAAGGTAAA AGCACCCCGG AAGGAGTTGA AATAGAACCT GAAACCGTGT 240  
 30 GCTTACAAGT AGTCAGAGCC CGTTAATGGG TGATGGCGTG CCTTTGTAG AATGAACCGG 300  
 CGAGTTACGA TTTGATGCAA GGTTAAGCAG TAAATGTGGA GCGTAGCAn AAnnTGTCT 360  
 GAATAGGCGC TTATGATTTT TGTCGTAGC CCGAGAACCA 400

(2) INFORMATION FOR SEQ ID NO: 3718:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 40 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3718:

TAATTCATCT GCAGCATCTG GTTGATTAA GCTTTCACGT AACACATCG CTAAGATAG 60  
 AATCATTCOA AATGGATTGG CAACGTTTTT ACCTGCAATA TCTGGTCTG ATCCATGAAT 120  
 50 AGGCTCATAC AATCTGGAC CATCGTTACT AAAACTAGCA GAAGGTGATA AACCAGTGA 180  
 ACCAGGAATC ACTGAAGCTT CATCACTTAA AATATCGCCA AATAAGTTTT CACATACGAT 240  
 GACGTCAAAT TGTTTTGGnA TTGTGATTA AATGCATACT ACAAGCATCA ACAAATAAGT 300

55

TTTACTAGAA GCTAATACAT TTCCTTATCA ACGGATGThA

400

(2) INFORMATION FOR SEQ ID NO: 3719:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 400 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3719:

ATTTAAACT GCTTGGCAAC GTTCTACTCT AGCGGAAnTA AGTnGAGCTA CCATCGACGC 60  
 TAAGGAGCTT AACTTCTGTG TTCGGCATGG GAACAGGTGT GACCTCCTTG CTATAGTCAC 120  
 CAGACATATG AATGTAATTT ATACATTCAA AACTAGATAG TAAGTAAAG TGATTTTGCT 180  
 TCGCAAACA TTTATTTGA TTAAGTCTTC GATCGATTAG TATTCGTCAG CTCACATGT 240  
 CACCATGCTT CCACCTCGAA CCTATTAACC TCATCATCTT TGAGGGATCT TATAACCGAA 300  
 GTTGGGAAAT CTCATCTTGA GGGGGCTTC ATGCTTAGAT GCTTTCAGCA CTTATCCCCT 360  
 CCACACATAG CTACCCAGCT AGCCGTTGGC ACGACAAnGG 400

(2) INFORMATION FOR SEQ ID NO: 3720:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 400 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3720:

CGTTACACCT TCCAATAAAT TTGCTGTGTC TGGATAAGGA GAAATATTGA TATATTGTCT 60  
 TAAATTACTA TAATGCCAAT TTAAGTCTGG ATGATTGTTT AAGACACCAA TAGGATTATC 120  
 TTTTATAACC ACTTCACCCT CTTTAAATGA AACTTCGACT GTATGTCAG TTGCATCGGA 180  
 AACATGATAA TGCAATGGCG GAACCTCACC GATGTCATTT AAATATACAG CTACAACATG 240  
 TATTGGGAT GCTTGTGTT TCATATCTTC AATGCTTGTT GTATATCCCA AAATCCATGT 300  
 CACAATTICA TTTTGGGTAA TATTATCGC GTCCGCTTTG TGTGTGGAT CCATATGGAA 360  
 CTATAACCTC GGGAAATATT GTGGTTGAAA TGGGCACGCC 400

(2) INFORMATION FOR SEQ ID NO: 3721:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3721:

AGTCAGTTTA TAGCGATTGC TGGACTGACA GTACTTGTGC CATTATTGCC AATTIATATG	60
GCATCACTAC AAAATCTATC AGTCGTAGAA ATACAGTTGT nGAGTGGTAT AGCGATTGCT	120
GCTCCAGCTG TAACGACGAT GATAGCTTCG CCGATATGGG GGAAGCTAGG TGATAAGATC	180
AGCCGAAAAT GGATGGTGT AAGAGCGTTA CTTGGTTTGG CGGTATGCTT ATTTTAAATG	240
GCATTGTGTA CGACCACTT ACAGTTTGTG CTTGGTGAGG TTATTGCAGG GACTATTTGG	300
TGGTGTGTTT GATGCATCAA GTGCGTTTGC GAGTGCAGAA GCGCCACTG AnAGATCGTG	360
GGAAAGGTAT TAGGAAGACT GCAAATTnCA GTTCAGCGCA	400

20

(2) INFORMATION FOR SEQ ID NO: 3722:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3722:

TCTAAAAGTT GAACTACTCC CGCATAAACC TGGAGGCGGC AACCGGATTT GAACCGGTGA	60
TAAAGGTTTT GCAGACCTCT GCCTTACCAC TTGGCTATGC CGCCAATAAC TGGGCTAGCT	120
GGATTGGAAC CAACGAGTGA CGGATAAAGT CCGTTGCCIT ACCGCTTGGC TATAGCCCAT	180
TAATAATAAG GGGGCTGAA GGGGATCGAA CCCTCGAATG TCGGAACCAC AATCCGATGT	240
GTAAACCATC TCACCACAGC CGCCATGGCA GGGGCGAGTAG GAATCGAACC CACACCAAAG	300
GTTTGGGAGA CCTCTATTCT ACCTTGAAC TATGCCCTCA TTAATAATGAT AAATGGAGGG	360
GGGCAGATTC GAACTGCCGA ACCGAGGGG CGGATTTTAC	400

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(2) INFORMATION FOR SEQ ID NO: 3723:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3723:

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GGTTCAAGTC CTCTGSCCGG CACCATTThT GGAGGGGTAG CGAATGGCTA AACGCGCGG 120  
 5 ACTGTAAATC CGCTCCTTCG GGTTCGGCAG TTGGAATCTG CCCCCCTCCA TTTATTATT 180  
 TTAATAGGGG CATAGTTCAA CGGTAGAATA GAGGTCTCCA AAACCTTTGG TGTGGGTTCTG 240  
 ATTCTACTG CCCCCTCCAT GGCGGCTGTG GTGAAGTGGT TAACACATCG GATTGTGGTT 300  
 10 CCGACATTCG AGGGTTCGAT CCCCCTCAGC CGCCTTATTA TTAATGGGCT ATAGCCAAGC 360  
 GGTAAGGCAA CGGACTTTGA CTCCTCACT CGTTGGTTCTG 400

(2) INFORMATION FOR SEQ ID NO: 3724:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 20 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3724:

CACTTTAGCA AATGGTGACA AAGTCCGTAT TGCTACAATT TTTGACTTAA TGGCAAGTCA 60  
 25 ATATGGCGTG CGTCGTTTTG ATCATAAATT AGAATCAAAA GGATACGACG ATGCAGAATC 120  
 AAAATATACA CCTGCTTGGC AAGAAGCCAT TTCAGGCGTA AAACAAAGTG TThGTCAATC 180  
 30 AAGTAGCGAA AGAATTGCG CAAAACGCTA TCGATACTGA AGGCGCTCA ATGATTATCA 240  
 TGGGTGCGGG TATTAAACAT TGGTTTAACT CAGATACGAT TTATCGTTCC AATCTTAAAC 300  
 TTAGTTATGT TATGTGGCTG TCAGGTGTGA ATGGTGCGGG TTGGGGCTCA CTATGTGGGG 360  
 35 ACAAGAAAAA TGTCGTCCGA TTGAAGGATG GAGTACTGTC 400

(2) INFORMATION FOR SEQ ID NO: 3725:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 476 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3725:

CGCTATCTGA ATCTGAATCG CTATCTGAAT CTGAGTCGTT GTCTGAGTCC GAATCGCTAT 60  
 50 CTGAATCTGA GTCGCTATCT GAGTCTGAGT CGCTATCTGA ATCTGAGTCG CTGCTGAAT 120  
 CTGAATCACT GTCTGAGTCT GAGTCGCTGT CTGAGTCTGA ATCGCTGTCA GAATCTGAGT 180  
 CGCTATCTGA GTCTGAATCT GAATCACTGT CTGAGTCCGA ATCGCTATCT GAATCTGAAT 240

CCGAGTCIGA ATCGCTGICT GAGTCTGAGT CGCTGTCTGA ATCTGAATCG CTATCTGAGT 360  
 CTGAGTCGCT GTckGAATgC GCTGICTGAA TCTGAGTCGC TATGCTGAAT GCTGAGTnCG 420  
 CTATGTGAGT CTGAATGCGC TGTGCAGAAT CTGAGTGC GC TCATCTGATG TTICTT 476

(2) INFORMATION FOR SEQ ID NO: 3726:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3726:

ATACGACCAC TGTTTAATGC GTCCATAAA TCTGCCAAAT TATTGAATTT AACTAATTCT 60  
 AGTTTATATT TCGGATGATT GTATTGTGAT AATAATTTTT TAGTCATCAT CAAATTAGCT 120  
 GAATGTGTAA TCGGCAAATA TCCAATTTTA ATCACTTGCT GATTTTGGGC ATTTTITAGAC 180  
 CGTCTTTAG ACGTCCTTTG CCAATCACAT CCTGTAATTA TAAAGATTCC AATGATGACG 240  
 ATTATGCTTA ACCTTTTCAT CGTCACTCAC TCCTTATAAA TAATATTGAG GTTCAACTTG 300  
 ATGATGATTC AATGCCAAGT TTCCATAAIT TCATTACGAA TCTTAAGTAG GTGGCTATCA 360  
 TTACGGAAGT CGTGGATGTG AnGCTGTAAA TTCCATAnTG 400

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(2) INFORMATION FOR SEQ ID NO: 3727:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3727:

ACGACGGATA GGAACCGAAC TGCTCACGA CGTTCTGAAC CCAGCTCGCG TACCGCTTTA 60  
 ATGGGCGAAC AGCAAACCTT TGGGACCGAC TACAGCCCCA GGATGCGATG AGCCGACATC 120  
 GAGGTGCCAA ACCTCCCCGT CGATGTGAAC TCTTGGGGGA GATAAGCCTG TTATCCCCGG 180  
 GGTAGCTTTT ATCCGTTGAG CGATGGCCCT TCCTATGCGA ACCACCGGAT CACTAAGTCC 240  
 GTCTTTCGAC CCTGTCGAC TTGTAGGTCT CGCAGTCAAG CTCCTTTATG CCTTTACACT 300  
 CTATGAATTA TTCCAACCA TTCTGAGGGA ACTTTGAGCG CCTCCGTTnC CTTTITAGGAG 360  
 GCGAACGGCC CCAGTTCAAA CTGCCCCGCT GAACACTGTC 400

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3728:

TTGAAAGTC ATATCAAAGC GCACATGTTT TTAAGCGTCG TCGAACACCT ATCGTGAAAG 60  
 GTGTGTCATT TGAGTGCCCA ATCGGTGCGA CGATTGCGAT TATCGGAGAA AGTGGTAGCG 120  
 GTAAATCGAC GTTGAGTCTA TTGATATTAG GTATTGAGAA ACCGGATAAA GGTGTGTATA 180  
 CCTTAAATGA TCAACCGATG CATAAGAAGA AAGTGAGACG TCATCAAATT GGTGCTGTAT 240  
 TTCAAGATTA TACGTCATCA TTACATCCAT TTCAGACTGT TAGAGAAATC TTATTGAAG 300  
 TGATGTGICA ATGTGATGGA CAACCTAAAG AAGTTATGGA AGTCCAAGCA ATTACATTGT 360  
 TGGAGAAGT CGGTCTATCT AAGGCATACA TGGGATAAAT 400

(2) INFORMATION FOR SEQ ID NO: 3729:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3729:

ATCGAACCCC CGACCTCAGG GGTATGAACC GTACGCTCTA GCCAGCTGAG CTACACCGCC 60  
 TTATATAGTT TGTAATAAAT ATGGTGAGGA CTAGCGGGAT CGAACCGCTG ACCTCCTGCG 120  
 TGCAAAAGAC CGCTCTCCCA GCTGAGCTAA GCCCCATATA TAATTACAGT ATATCGGGAA 180  
 GACAGGTTTC AACCTGCGAC CCCTTGCTCC CAAACCAAGT GCTCTACCAA GCTGAGCTAC 240  
 TTCCCGTATA ATTAACGCGC CCGATAGGAG TCGAACCCAT AACCTCTTGA TCCGTAGTCA 300  
 AACGCTCTAT CCAATTGAGC TACGGGCGCA TATGTTTTTA TTGAAAATGG TGCCGAGGAC 360  
 CGGAATCGAA CCGTAGTGA ATCACTCACC GCAGATTITA 400

(2) INFORMATION FOR SEQ ID NO: 3730:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3730:

5 ATCTCTGAT CAAAGCTTAC TTACAGCTCC CCAAAGCATA TCGTCGTTAG TAACGTCCTT 60  
 CATCGGCTTC TAGTGCCAAG GCATCCACCG TGCGCCCTTA ATAACTTAAT CTATGTTTCC 120  
 ACCATTTTITA TAAGTCAAAC GTTAACATGA AGTTACGTTT TTTTATAAAA AGATTTAAAC 180  
 10 GCGTTATTAA TCTTGTGAGT GTTCTTTCGA ACGTACGCGA TTATTTCITA TGAATTCAAG 240  
 CTTATTITAAA ACTCTTTATT CACTCGGTTT TGCTTGTTAA AATCTATATT TTACTTACTT 300  
 ATCTAGTTTT CAATGTACAA ATAATGGTGG AGACTAGCGG GATCGAACCG CTGACCTCCT 360  
 15 GCGTGCAAAG CAGGCGCTCT CCCAGCTGAG CTAAGCCCCC 400

(2) INFORMATION FOR SEQ ID NO: 3731:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 401 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3731:

TGATTACAAG TCAGTTGCTC TACCAATTGA GCTAGGCCGG CAATATGTAA GAATAAATGG 60  
 30 TGGAGAAATGA CGGGTTTCGAA CCGCGACCCC TCTGCTTGTA AGGCAGATGC TCTCCAGCT 120  
 GAGCTAATTC TCCGATTTAA AACTGCCTGG CAACGTTCTA CTCTAGCGGA ACGTAAGTTC 180  
 GACTACCATC GAGGCTAAGG AGCTTAACTT CTGTGTCGG CATGGGAACA GGTGTGACCT 240  
 35 CCTTGCTATA GTCACCAAGC ATATGAATGT AATTATACA TTCAAACTA GATAGTAAGT 300  
 AAAAGTGATT TTGCTTCGCA AAACATTAT TTTGATTAA: GTCTTCGATC GATTAGTATT 360  
 CGTCAGCTCC ACATGTCACC ATGCTTCCAC CTCGAACCTA T 401

(2) INFORMATION FOR SEQ ID NO: 3732:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 397 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3732:

50 CATTTATTAC GGCTATGSTT TAACTGAAGC ACCTCTGTGA CTGTITAATA CACCGGAAAA 60  
 TTCAAAACGT AAGCCAATGA GTATTGGTAA AGCAGTCATG TTCGTTGATG CACGTATCCT 120

AAATGTCACG CCAGGATATT GGAATAAACC AGCAGAGACT GCCAAAGCAT TTCATGGTGC 240  
 ATATTTATTA ACTGGTGACT TAGCGAGATG GACAACGATG GCGATATATT TATTATTGAC 300  
 5 CGCAAAaAG AaTTAATCAT AACTGGTGGc GAAAATGTCT TACCATCCGa gTCGAAAtGC 360  
 TTactGaGCA TCCACTAGTA GACCGGTGTG TGGTCGT 397

(2) INFORMATION FOR SEQ ID NO: 3733:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3733:

AAGTAACAAT CGTTCACCGT CGTGATGAGT TAGTGCACA GCGTATTTTA CAAGATAGAG 60  
 CATTCAAAAA TGATAAAATC GACTTTATTT GGAGTCATAT TTTGAAATCA ATTAATGAAA 120  
 AAGACGGCAA AGTGGGTCTT GTGACATTAA CGTCTACAAA AGATGGTTCA GAAGAAACAC 180  
 25 ACGAGGCTGA TGGTGTATTC ATCTATATTG GTATGAAACC ATTAACAGCG CCATTTAAAG 240  
 ACTTAGGTAT TACAAATGAT GTTGTTTATA TTGTAACAAA AGATGATATG ACAACATCAG 300  
 TACCAGGTAT TTTTGCAGCA GGNATGTTC GCGACAAAGG TTACGCCAAA TTGTCACTGC 360  
 30 CACGGGATG GTAGTATGCC AGCGCAAGTG CCACGGAATG 400

(2) INFORMATION FOR SEQ ID NO: 3734:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 480 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3734:

GCGGTTTACT GTGGCTTCGA TTCGTAGCTT CGCAGAAGCT AACCACCTCT CTTAACCTTC 60  
 45 CAGCACCGGG CAGGCGTCAG CCCTATACAT CACCTTACGG TTTAGCAGAG ACCTGTGTTT 120  
 TTGATAAACA GTCGCTTGGG CCTATTCACT GCGGCTCTTC TGGGCGTTAA CCCTAAAGAG 180  
 CACCCCTTCT CCCGAAGTTA CCGGGTCATT TTGCGAGTT CCTTAACGAG AGTTCGCTCG 240  
 50 CTCACCTTAG AATTCTCATC TTGACTACCT GTGTCGGTTT GCGGTACGGG CACCTATTTT 300  
 CTATCTAGAG GCTTTTCTCG GCAGTGTGAA ATCAACGAcT CGAAGACACA ATGTCCTTCTC 360

TAGACGTGCA ATCCAATCGG CAACGCTTCG CCTAATCCTA ACTGGCGGTC CCCCCCnAT 480

(2) INFORMATION FOR SEQ ID NO: 3735:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3735:

CGATCCCTTC AGCGGGACTT GGGTATTCCT CCAAAATTAT ATGGACCTTG CAGACTCGAA 60  
 CCTGCGACCG AACGGTTATG AGCCGTTAGC TCTAACCAAC TGAGCTAAAG GTCCTAAATA 120  
 TAATTTTACA ACTATAAAT AGTGGCGGTG GAGGGGATCG AACCCCCGAC CTCACGGGTA 180  
 TGAACCGTAC GCTCTAGCCA GCTGAGCTAC ACCGCCTTAT ATAGTTTGTA AATAATATGG 240  
 TGGAGACTAG CGGACTCGAA CCGCTGGACC TCCTGCGTGC AAACAGnCGC TCTCCAGCT 300  
 GAGCTnAAGC CCCCATAATA ATTACAGTAT ATCGGGAAGA CAGGATTGGA ACCTGCAGCC 360  
 CCTTGGTCCC CAAACCAAGT GGTThACCA AGTTGAGCTA 400

(2) INFORMATION FOR SEQ ID NO: 3736:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3736:

TGAGCCCGAC GAGCTACCGA ACTGCTCCAT CCCCGATAA TAAAAAATAA TGGCGGAGGA 60  
 AGAGGGATTG GAACCCCCGC GGCCCGTTAA GGCCCTGTG GTTTCAAGA CCGATCCCTT 120  
 CAGCCGGACT TGGGTATTC TCCATTATTA TAGGTAAATC GCTATTAATT ATAAAAITAA 180  
 ATGGCGGTCT CGACGGGAAT CGAACCCGCG ATCTCTGCG TGACAGGCAG GCGTGTTAAC 240  
 CGTACACTA CGAGACCATT AGTAAAACGG AGGAAGAGGG ATTGGAATCC CCGCGAGCCG 300  
 TTAAGCCCTT GTCGGTTTTT AAGACCGATT CCTTCAGCG GACTTGGGTA nTnTCCAAA 360  
 ATTATATGGA CCTGTCAGGA CTGAACTGC GAnCGAACGG 400

(2) INFORMATION FOR SEQ ID NO: 3737:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3737:

	TAATAATTAC AGTATATCGG GAAGACAGGA TTCGAACCTG CGACCCCTTG GTCCCAAACC	60
10	AAGTGCTCTA CCAAGCTGAG CTACTTCCCG TATAATTAAC GCGCCCGATA GGAGTCGAAC	120
	CCATAACCTC TTGATCCGTA GTCAAAAGCT CTATCCAAIT GAGCTACGGG CGCATATGTT	180
	TTTATTGAAA ATGSGCCGA GGACCGGAAT CGAACCGGTA COTGATCACT CACCGCAGGA	240
15	TTTTAAGTCC TGTGCGTCTG CCAGTTCGCG CACCCCGGCA CTATAAAAAT GGAGCAGAAG	300
	ACGGGATTTCG AACCCGCGAC CCCAACCTTG CGAAGGTTGT ATTCTACCGC TGAACACTTT	360
20	CTGCATATGC GGTGAAGGG AGTCGAACCC CCACGCCGTA	400

(2) INFORMATION FOR SEQ ID NO: 3738:

	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 400 base pairs
25	(B) TYPE: nucleic acid
	(C) STRANDEDNESS: double
	(D) TOPOLOGY: linear

30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3738:

	AGAAATGACGG GTTCGAACCG CCGACCTCT GCTTGTAAGG CAGATGCTCT CCCAGTGAG	60
	CTAATTCTCC GATTAAAAC TGCCTGGCAA CGTCTACTC TAGCGAAGT AATCGGAhCT	120
35	ACCATCGACG CTAAGGAGCT TAACTTCTGT GTTCGGCATG GGAACAGGTG TGACCTCCTT	180
	GCTATAGTCA CCAGACATAT GAATGTAATT TATACATTCA AAACAGATA GTAAGTAAAA	240
	GIGATTTGCG TTCGCAACA TTTATTTTGA TTAAGTCTTC GATCGATTAG TATTCGTCAG	300
40	CTCCACATGT CACCATGCTT CCACCTCGAA CCTATTAACC TCATCATCTT TGAGGGATCT	360
	TATAACCGAA GTTGGGAAAT CTCATCTTGG AGGGGGGCTT	400

45 (2) INFORMATION FOR SEQ ID NO: 3739:

	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 400 base pairs
	(B) TYPE: nucleic acid
50	(C) STRANDEDNESS: double
	(D) TOPOLOGY: linear

55 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3739:

CACCACCGGA CATATTTTCC ACTTCCGAAC TTAATTGATA ATGTCCCAA COGACATCTT 120  
 TAATTAATTG CThTGCACGT TTCTATCAA ATTTATCATT ACGTGCAAGT GATGGGAATA 180  
 5 TCATGTTATC TTCAATCGTT TCACCAACAA AGTCACITTG CTGCATCAAA TAACTGATTC 240  
 GTTGACGCAA TTCTCCGGG TCATAATCAT TATAGGGTTT ACCTTTAAAA TAAAGTTCTC 300  
 10 CACTAGTTGG ACTAAACAAA TTACATATnT GCTTTTGAAA TGTACTTTTA CCACTACCTG 360  
 ATGGACCTAT AATGGCAATA CTCTCGCCTT TATCTACTTT 400

(2) INFORMATION FOR SEQ ID NO: 3740:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 413 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3740:

ATGCGTTGCT TCTTTCCTCT CCTTCGGCTC TCGCTTACTC ATTTAGCTCT ACTAAACTCG 60  
 25 TTGCGCTCTT TTCTCGTTTC GTCAGATTCA AACGTTTTC CTTCGCCAAG CCATTTTCTT 120  
 TTGTGTTTAC TTTTATTTT GACGTTTTAG ACATAAAAAA AAGAGACCTT GGGTCTCAA 180  
 30 TCGCGCTCAT CGCATCCATT TTTTGCCTGG CAACGTCTTA CTCTAGCGGA AnTAATTGGC 240  
 TACCATCGAC GCTAAGAACC TTCTTGACT TGTGACAATC GCTTGCTTCT TTCCTCTTCT 300  
 TCGGCTCTCG CTTACTCATT TAGCTCTACT AAACCTGTTG CGCTCTTTTC TCGTTTCGTC 360  
 35 AGATTCAAAC GTTTTCACCT CGCCAAGCCA tTTTTCtTTG TGTTCGCTT TnA 413

(2) INFORMATION FOR SEQ ID NO: 3741:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3741:

CTTAGATGCT TTCAGCACTT ATCCCGTCCA CACATAGCTA CCAGCTATG CCGTGGCAC 60  
 GACAACCTGGT ACACCAGAGG TATGTCCATC CCGGTCTCTT CGTACTAAGG ACAGCTCCTC 120  
 50 TCAAATTTCC TACGCCACG ACGGATAGGG ACCGAACCTG CTCACGACGT TCTGAACCCA 180  
 GCTCGGTAC CGCTTAAATG GGGAACAGC CCAACCCCTG GGACCGACTA CAGCCCCAGG 240

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TAAGCTGTTA TCCCCGGGGT AGCTTTTATC CGTGTAGCGA TGGCCCTTCC ATGCGGAACC 360  
 ACCGGATCAn TAAGTCCGTC TnTCGACCCT GntGGACTTG 400

(2) INFORMATION FOR SEQ ID NO: 3742:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3742:

GTITTGAATG TATAAATTAC ATTCAATGT CTGGTGACTA TAGCAAGGAG GTCACACCTG 60  
 TTCCCATGCC GAACACAGAA GTTAAGCTCC TTAGCGTCGA TGGTAGTCGA ACTTACGTTT 120  
 CGCTAGAGTA GAACGTTGCC AGGCAGTTTT AATCGGAGA ATTAGCTCAG CTGGGGAGAG 180  
 CATCTGCCTT ACAAGCAGAG GGTGGGCGGT TCGAACCCGT CATCTCCAC CATTTATCTT 240  
 TACATATTGC CGGCCTAGCT CAATTGGTAG AGCAACTGGA CTGTGAATCA GTAGGTTGGG 300  
 GGTTCAGTC CTCTGGCCGG CACCATGGGA AGAGCCATTA GCTCAGTTGG TAGAGCATCT 360  
 GACTTTTAAA TCAGAGGGTT CAGAGGTTnC GAATCCGCTA 400

(2) INFORMATION FOR SEQ ID NO: 3743:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3743:

TCGCAATAAC CGCATCAAAT GTATTGCCTA AAAAGGCTGG ATTTTCCAAT GTGTCATCAT 60  
 TACGGATCTC GAAGTTCTCA TAACGCACAT CATGTAATAA CATATTTCATG CGTGCTAAGT 120  
 TGTATGTAGT ATTGTTACGT TCTTGTCGA AATAACGATA CACTTGCCTT TCTTTACCAA 180  
 CACGTAACAA CAATGAACCG GAACCACATG TTGGGTCGTA CACGTGACGT AATTTATCTT 240  
 TACCGTCTGT GACAATCTTC GCCAGTATCT TAGATACTTG TTGTGGTGTA TAGAACTCGC 300  
 CTGCTTTTTT ACCCGCTGTC GCCGAAACG GCCCGATTAG GAATTCATAT GCATCACCTA 360  
 ACATATCAAT TTCCATGGTC ACTGTGAACG AATGGGTAAG 400

(2) INFORMATION FOR SEQ ID NO: 3744:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3744:

10	CTACTGATTA CAAGTCAGTT GCTCTACCAA TTGAGCTAGG CCGGCAATAT GTAAGAATAA	60
	ATGSGTGAGA ATGACGGGTT CGAACC GCCG ACCCTCTGCT TGTAAAGGCAG ATGCTCTCCC	120
	AGCTGAGCTA ATTCTCCGAT TTAACACTGC CTGGCAACGT TCTACTCTAG CGGAACGTAA	180
15	GTTGCACTAC CATCAACGCT AAGGAGCTTA ACTTCTGTGT TCGCATGGG AACAGGTGTG	240
	ACCTCCCTGC TATAGTCACC AGACATATGA ATGTAATTTA TACATTCAAA ACTAGATAGT	300
	AAGTAAAGT GATTGTCTTC GCAAAACATT ATTTGATTAA GTCTCTGATC GATAGTATCG	360
20	TCAGCTCCAC ATGTACCAT GCTTCCACT CGACCTATT	400

(2) INFORMATION FOR SEQ ID NO: 3745:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 386 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3745:

	CATAAGTAAA CTCTGCTTTA AAATAATTTA ACTCATGTG TGCTAAACGT TTTCTTTTAT	60
35	AAAAAGATT AAACGCGTTA TTAATCTTGT GAGTGTCTT TCGAACACTA GCGATTATTT	120
	CTTATGAATT CAAGCTTATT TAAACTCTT TATTCACG GTTTTGCTTG GTAAATCTA	180
	TATTTTACTT ACTTATCTAG TTTTCAATGT ACAATTTCTT TTTAGTCAAG CGCTCGCATA	240
40	CTGCTTTATT nTCAAAAAAT CAAATGCTCA TTTACAAAAG TAAACTCGC TTTAATTTTC	300
	TTAATGCATT GTCTAACCAAC CGCTTGCTTT AAAAAGAATA GATTGhCAAG CGCTCGCATA	360
	AGCAATATCA CTThAACCA AAAATA	386

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(2) INFORMATION FOR SEQ ID NO: 3746:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 677 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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AAGGTGAAAA GCACCCCGGA AGGATGTTGA AATAGAACCT GAAACCGTGT GCTTACAAGT 60  
 AGTCAGAGCC CGTTAATGGG TGATGGCGTG CCTTTGTAG AATGAACCGG CGAGTTACGA 120  
 5 TTTGATGCAA GGTTAAGCAG TAAATGTGGA GCCGTAGCAK AACanGGTCT GAATAGGGCG 180  
 TTTAGTATTT GGTCGTACCG AnAACCCAGGT GATCTACCCT TGCTCAGGTT GAAGTTCAGG 240  
 10 TAACACTGAA TGGAGGACCG AACCGACTTA CGTTGAAAAG TGAGCGGATG AACTGAGGGT 300  
 AGCGGAGAAA TTCCAATCGA ACCTGGAGAT AGCTGGTTCT CTCCGAAATA GCTTTAGGGc 360  
 TAGCCTCAAG TGATGATTAT TGGAGGTAGA GCACTGTTTG GaCGAgGGGc CCCTCTCGGG 420  
 15 tTACCAATTc AGACAAATC CGAATGCCAA TTAATTTAAC TTGGGgAGTC aGAACATGG 480  
 TGATAAGGTC CGTGTTCGAA AGGGAACAG CCCAGACCAC CAGCTAAGGT CCCAAATAT 540  
 ATGTTAAGTG GAAAAGGATG TGGCGTTGCC AGACAACTGA GGATGTTGCC ITAGAAGCAG 600  
 20 CCATCAITTT AAAGAGTCCG TAATAGCTCA CTAGTCGAAG TGACACTGCG CCGAAAATGT 660  
 GACCGGGChT AAACHAT 677

(2) INFORMATION FOR SEQ ID NO: 3747:

25 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 417 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 30 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3747:

35 GTCCAATGAT TCATATGCTT TATTATCACG GTATTGCCTT TGAATCGCAT GCACAAAATA 60  
 TGATGCTCAT TCATGAAAAT GGTTCGCCTA CACGTATGCG CTTAAAAGAT TTCCATGATG 120  
 GTGTTGCTTT TAAGCGTGAc ATTAAAGTGA AGCTGCTTCA CACCTGACAT TAAAGCCAAT 180  
 40 GCCAGAAGCA CATAAAAAAG TGAATAGTAA TTCATTTATT GAAACAGATG ACGAACGTTT 240  
 AGTACGCGAC TTTTACATG ATGCATTTTT CTTTATTAAAT ATCGCCGAAA TCATCTTATT 300  
 45 TATIGAAAAG CAATATGGTA TCGATGAGGA GCTGCAATGG CAATGGGkTa AAGGCATCAT 360  
 CGAGGCGTAT CCAGrAGcAT TTCCaGAGTT kGAATaACTA TCCAACCATT CGGTTTT 417

(2) INFORMATION FOR SEQ ID NO: 3748:

50 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 55 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3748:

ATGCTCTCCC AGCTGAGCTA ATTCTCCGAT TTAAAACTGC CTGGCAACGT TCTACTCTAG 60  
 5 CGGAACGTAA GTTCGACTAC CATCGACGCT AAGGAGCTTA ACTTCTGTGT TCGGCATGGG 120  
 AACAGGTGTG ACCTCCTTGC TATAGTCACC AGACATATGA ATGTAATTTA TACATTCAAA 180  
 ACTAGATAGT AAGTAAAAGT GATTTTGCIT CGCAAAACAT TTATTTTGAT TAAGTCTTCG 240  
 10 ATCGATTAGT ATTGTCAGC TCCACATGTC ACCATGCTTC CACCTCGAAC CTATTAACTT 300  
 CATCATCTTT GAGGGATCTT ATAACCGAAG TTGGGAAATC TCATCTTGAG GGGGGCTTCA 360  
 15 TGCTTAGATG CTTTCAGCAC TTATCCCGTC CACACATAGC 400

## (2) INFORMATION FOR SEQ ID NO: 3749:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3749:

TCGGCTCTCG CTACTCAIT TAGCTCTACT AAACCTGTTG CGTCTTTTC TCGTTTCGTC 60  
 25 AGATTCAAAC GTTTCACCTT CGCCAAGCCA TTTTCTTTG TGTTTACTTT TTATTTTGAC 120  
 30 GTTTTAGGCA TAAAAAAG AGACCTTGCG GTCTCAATGC GGCTCATCGC ATCCATTTTT 180  
 TGCTGGCAA CGTCTACTC TAGCGGAAGT AAGTTGGGCT ACCATCGTCG CTAAGACCTT 240  
 35 TTCTTGACTT GTGACAATCG CTGCTTCTT TCCTCTCCTT CGGCTCTCGC TTACTCATTT 300  
 AGCTCTACTA AACTCGTTGC GCTCTTTTCT CGTTTGTCGA GATTCAAACG TTTTCACTTC 360  
 40 GCCAAGCCAT TTTTCTTTG TGTtTACTTT TTAATTTTGA 400

## (2) INFORMATION FOR SEQ ID NO: 3750:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3750:

ATAAAAAAGAGACCTTGC GGTCTCAAT GCGGTCATC GCATCCATT TTTGCGCTGC 60  
 AACGTTCTAC TCTAGCGGAA CGTAAGTTGG CTACCATCGT CGCTAAGAC CTTTCTTGAC 120

TAAACTCGTT GCGCTCTTT CTCGTTTCGT CAGATTCAAA CGTTTTCACT TCGCCAAGCC 240  
 ATTTTCTTT GTGTTTACTT TTTATTTTGA CGTTTTAGAC ATAAAAAAAA GAGACCTTGC 300  
 5 GGTCTCAATG CGGCTCATCG CATCCATTTT TTGCTGGGC AACGTTCTAC TCTAGCGGAA 360  
 nTAAnTTGGG CTACCATCGA CGCTAAGAAC CTTTCTTGGa 400

10 (2) INFORMATION FOR SEQ ID NO: 3751:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3751:  
 20 CACTCACCGC AGATnTTTAA GTCTGTGCG TCTGCCAGIT CGGCCACCCG GGCACATATA 60  
 AAATGGAGCA GAAGACGGGA TTCGAACCCG CGACCCCAAC CTTGGCAAGG TTGTATTCTA 120  
 CGCTGAACT ACTTCTGCAT ATGCGGGTGA AGGGAGTCGA ACCCCCACGC CGTAAGCTnA 180  
 25 GnATTCTTAA GTCTAGTGGC TCTGCCAATT CGGCCACACC CGCAAAATGGT GAGCCATAGA 240  
 GGATTGGAAC CTCTGGACCC TCTGATTAAA AGTCAGATGC TCTACCAACT GGAGCTAATG 300  
 30 GCTCTTTCCA TGGTGCCCGG CCAGAGGACT TGGAAACCCC AACCTACTGA TTACAAGTCA 360  
 GTTGCTCTAA CCAATTGAGC TAAGCCGGGC AATATGTTAn 400

35 (2) INFORMATION FOR SEQ ID NO: 3752:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3752:  
 45 TTAnAnAnCC GGCACATTAT AGAGCCAATC ACTAGCCTAT CTCAGAATCA CCAACGAATC 60  
 CTTCAATTAT AAGGAATCTA GGCATCTTTA CGCGTGCGTT CTAATCGCAT CTTTTTCAAT 120  
 CTAAGTCGCT TTGTGACAAC ACTTACTGAA CTTAGTGCCA TTGAGACACC AGCAACCCAT 180  
 50 GGCGCAAGTA AGCCCAATGC AGCTATAGGG ATACCGGCAA TATTATAGCC GAATGCCCAA 240  
 AATAGATTTT GACGAATATT ACGAATGGTT GcTTTACTTG cATAAATGGC TTTAGGAATa 300  
 AGCATCAAGT cGCCACCAAG AATAGTAATA TCAGCTGCTT CAATGGGCAA CTTCTGTGTAC 360

## (2) INFORMATION FOR SEQ ID NO: 3753:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3753:

CCTTGCGGTC TCAATGGCGG CTCATCGCAT CCATTTTTTG CCTGGCAACG TTCTACTCTA	60
GCGGAACGTA AGTTGGCTAC CATCGTCGCT AAAGACCTTT CTTGACTTGT GACAATCGCT	120
TGCTTCTTTC CTCTCCTCG GCTCTCGCTT ACTCATTTAG CTCTACTAAA CTCGTTGCGC	180
TCTTTTCTCG TTTCTGTCAGA TTCAAACGTT TTCACTTCGC CAAGCCATTT TTCTTTGTGT	240
TTACTTTTAA TTTTGACGTT TTAGACATAA AAAAAAGAGA CCTTGCGGTC TCAATGCGGC	300
TCATCGCATC CATTTTTTGC CTGGCAACGT TCTACTCTAG CGGAACGTAA GTGGCTACCA	360
TCGACGCTAA GAACCTTTCT TGAAGGTGTA CAACCGCTTG	400

## (2) INFORMATION FOR SEQ ID NO: 3754:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 381 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3754:

CTGAGCTAAG CCCCCAAATA GGTATTAAAT TAATGGTGGG CTAAGTGA CTCGnACCAC	60
CGACCTCACG CTTATCAGGC GTGCGCTCTA ACCAGCTGAG CTATAGGCC ATTAATTGTA	120
ATGAnCAAAC ATTCAAACT GAATACAATA TGTCACGTTA TTCCGCATCT TCTGAAGAAG	180
ATGTTCCGAA TATATCCTTA GAAAGGAnGT GATCCAGCCG CACCTTCGA TACGGCTACC	240
TTGTTACGAC TTCACCCCAA TCATTTGTCC CACCTTCGAC GGCTAGCTCC TAAAGGTTA	300
CTCCACCGGC TTCGGGTGTT ACAAACCTCT GTGGTGTGAC GGGCGGTGTG TACAAACCC	360
GGGAACGTAT TCACCGTAGC A	381

## (2) INFORMATION FOR SEQ ID NO: 3755:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3755:

5 AGCTCCCCAA AGCATATCGT CGTTAGTAAC GTCCTTCATC GGCTTCTAGT GCCAAGGCAT 60  
 CCCCCTGCGC CCTTAATAAC TTAATCTATG TTTCCACCAT TTTTATAAGT CAAACGTTAA 120  
 CATGAAGTTA CGTTCTTTTA TAAAAGATT TAAACGCGTT ATTAATCTTG TGAGTGTCTT 180  
 10 TTCGAACATA GCGCATTATT TCTTATGAAT TCAAGCTTAT TTAANAATCT TTATTCACCTC 240  
 GGTTTTGCTT GGTAAAAACn ATATTTTACT TACTTATCTA GTTTTCAATG TACAATTTCT 300  
 TTTTAGTCAA GCGCTCGCAT ACTGCTTTAT TTTCCATAAG CAATAnCACT TTAACCAAAA 360  
 15 AATATTGGAA ATGTTnAAAT AAACATnCAA AACTGAATAC 400

## (2) INFORMATION FOR SEQ ID NO: 3756:

20 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
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## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3756:

CTACTCACAC CGGCATTCTC ACTTCTAAGC GCTCCACATG TCCTTACGAT CATGCTTCAA 60  
 30 CGCCCTTAGA ACGCTCTCCT ACCATTGTCC AAAGGCATGC GCACAGCTTC GGTAAATATGT 120  
 TTAGCCCCGG TACATTTTGG GCGCATGTCA CTCGACTAGT GAGCTATTAC GCACCTCTTA 180  
 35 AATGGATGGC TGCTTCTAAG CCAACATCCT AGTTGTCTGG GCAACGCCAC ATCCTTTTCC 240  
 ACTTAACATA TATTTTGGGA CCTTAGCTGG TGGTCTGGGC TGTTCCGGn GGGGnACACG 300  
 GACCTTATCA CCCATGTCTT GACTCCCAAG TTAAATTAAT TGGCATTGGG ATTTGTCTGA 360  
 40 ATCGTAACCG CGAGAGGGCC CnTCGTCCAA ACAGTGTCTT 400

## (2) INFORMATION FOR SEQ ID NO: 3757:

45 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 458 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3757:

55 GGCAGATGCT CTCCAGCTGG AGCTAATTCT CCGATTAAA ACTGCCTGGC AACGTTCTAC 60

ATGGGAACAG GTGIGACCTC CTTGCTATAG TCACCAGACA TATGAATGTA ATTTATACAT 180  
TCAAACTAG ATAGTAAGTA AAAGTGATTT TGCTTCGCAA AACATTTATT TTGATTAAGT 240  
5 CTTCGATCGA TTAGTATTCG TCAGCTCCAC ATGTCACCAT GCTTCACCT CGAACCTATT 300  
AACCTCATCA TCTTTGAGGG aTCTTATAAC CGAArTtGG GAAtCTCATC TTGAGGGGG 360  
10 gCTCATGcTt AGATGCTTcA GCACtTATCC CGTCCACACA TAGCTAnCCA GCTATGCCGT 420  
TnGCACGACA ACTGTACAC CAGAnGTATG TCCATCCC 458

(2) INFORMATION FOR SEQ ID NO: 3758:

15 (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3758:

AGCGCTCGCA TACTGCTTTA TTTTCAAAAA ATCAAATGCT CATTTACAAA AGTAAACTCC 60  
25 GCTTTAATTT TTCTTAATGC ATTGTCTAAC AACCGCTTTC TTTAAAAAGA ATAGATTGTC 120  
AAGCGCTCGC ATAAGCAATA TCACtTTAAC CAAAAATAT TTGAATGITA AATAAACATT 180  
30 CAAAACTGAA TACAATATGT CAGCTTATTC CGCATCTTCT GAAGAAGATG TTCCGAATAT 240  
ATCCTTAGAA AGGAGGTGAT CCAGCCGCAC CTTCGGATAC GGCTACCTTG TTACGACTTC 300  
ACCCCAATCA TTTGTCCAC CTTCGACGGC TAGCTCCTAA AAGGTTACTC CACCGGCTTC 360  
35 GGGTGITACA AACTCTCGTG GTGTGACGGG CGGTGTTGATC 400

(2) INFORMATION FOR SEQ ID NO: 3759:

40 (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3759:

GACTTGGGTA TTCTCCAAA ATTATATGGA CCTGCAGGA CTCGAACCTG CGACCGAAGC 60  
50 GTTATGAGCC GTTAGCTCTA ACCAACTGAG CTAAAGTCC TAAATATAAT TTTACAATA 120  
ATAAATAGTG GCGGTGGAGG GGATCGAACC CCCGACCTCA CGGGTATGAA CCGTAGCCTC 180  
TAGCCAGCTG AGCTACACCG CCTTATATAG TTTGTAAATA ATATGGTGGA GACTAGCGGG 240

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TAATAATTAC AGTATATCGG GAAGACAGGA TTCGAACCTG CGACCCCTTG GTCCCAAACC 360  
AAGTGCTCTA CCAAGCTGAA GCTACTTTCC CGTATAATTA 400

5 (2) INFORMATION FOR SEQ ID NO: 3760:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3760:

CACTTAATGC CGGTACCACA CATAGCTACC CAGCTATGCC GTTGGCAGCA CAACTGGTAC 60  
ACCAGAGGTA TGTCCATCCC GGTCCTCTCG TACTAAGGAC AGCTCCTCTC AAATTTCCCTA 120  
CGCCACGACG GGATAGGGAC CGAACTGTCT CACGACGTTT TGAACCCAGC TCGCGTACCG 180  
CTTTAATGGG CGAACAGCAA nCCCTTGGGA CGACTACAG CCCAGGATG CGATGAGCCG 240  
ACATCGAGGT GCCAAACCTC CCCGTCGATG TGAACCTCTG GGGGAGATAA GCCTGTTATC 300  
CCCGGGGTAG CTTTTATnCG TTGAGCGATG GnCCTTnCAT GCGGAACACC GGATCACTAA 360  
GTCCGTCITT CGACCCCTGCT CGACTTGTAG GTCTCGCAGT 400

30 (2) INFORMATION FOR SEQ ID NO: 3761:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 623 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3761:

TATGTATTTT ATAATGTACA GTCGTTGAn TcNtATTTTT CCtTATATTA AGTGCCATTA 60  
ATACAAAACC TAGCTCTCGT TTAACCTTAT TTAITCTCTG AACTGACATT CGAGTGAACC 120  
CAAAATAGCC TTCATAAATC CAAAAACAGG CTCACATCA ATTTTCTTTT GACTATAGAT 180  
TTTTTTCGTT TCTGGTTCAG AAAGCTTTTG ATTAATTGG ACTTTAAAGT ATTCCCAATT 240  
ATAATCTTTC ATGATTTTCT TATIGGATTT CGAATTGGT TTCATGCATT GATGTCTCAA 300  
AGAACATGAT GAACAGTCAT CACATTCATA TAGTTTGAAG TCTCGTTTAA AACCATATCT 360  
ATCATTAGCG TATGCATATC TTTTAAAACC TATTCTTTTG TTATTAGGAC ATATAAAATC 420  
ATCATTAAGT TCGTCATATT TCCAATTTTA AGTGTGTAAG ATGTCACTTT TAAACTTTCT 480

AATAGCCATA TAGTTTGTCT CACTACCATA ACCGGCATCA GCTACAAATA TACTCCGGTA 600  
 AATAACCGAG GGATTGTTGG AAT 623

5 (2) INFORMATION FOR SEQ ID NO: 3762:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 718 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3762:

15 ATTTTAAAA TAGTTCCTTA AATTATATAC CCACCACATT TGGTGGAGAA CCTAAAAAAA 60  
 AGCACTTCCC AAAAATGGAA AGTGCAAGTA GTGAGCCATA GAGGATTGGA ACCTCTGACC 120  
 20 CTCTGATTAA AAGTCAGATG CTCTACCAAC TGAGCTAATG GCTCTAATGG CTGGGCTAG 180  
 CTGGATTGGA ACCAACGAGT GACGGAGTCA AAGTCCGTTG CCTTACCGCT TGGCTATAGC 240  
 CCAATATATA GATGGTGGAG GGGGGCAGAT TCGAACTGCC GAACCCGAAG GAGCGGATTT 300  
 25 ACAGTCCGCC GCGTTTAGCC ACTTCGCTAC CCTCCAGCT TATTCATATA ATTTAATAAT 360  
 CAAAATGGTG GAGAATGACG GGTCGAACC GCCGACCCTC TGCTTGTAAG GCAGATGCTC 420  
 TCCAGCTGA GCTAATCTC CAAAATAATG ACTCTACGG GACTCGAACC CGTGTTACCG 480  
 30 CCGTGAAAGG GCGGTGTCTT AACCGCTTGA CCAAGGAGCC ATGGCTCCAC AGGTAGGACT 540  
 CGAACCTTAC GACCGATCGG TTTAACAGCC GATAGCTCTT ACCACTGGAG CTACTGTGGG 600  
 35 ATTAATATTA TGCCTGGGCA ACGTTCTTAC TCTTAGCGGA ACGTTAAGTT CCGACTTACC 660  
 ATCCGACGCT AAGGAGCTTT AACTTCTCnG TGGTCCGGC ATGGGGGGA CAGGTGGT 718

(2) INFORMATION FOR SEQ ID NO: 3763:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3763:

50 TnCACTCACC GCAGATTTT AAGTCCTGTG CGTCTGCCAG TTCCGCCACC CCGGCACTAT 60  
 AAAAATGGAG CAGAAGACGG GATTGGAACC CGCGACCCCA ACCTTGCAAA GGTGTATTTC 120  
 TACCGCTGAA CTACTCTGCG ATATGCGGGT GAAGGGAGTC GAACCCCCAC GCCGTAAGCT 180

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AGGATTGGAA CCTCTGGACC CTCTGATTAA AAGTCAGATG CTCTACCAAC TGGAGCTAAT 300  
 GGCTCTTCCA TGGTGCCGGC CAGAGGACTT GGAACCCCA ACCTACTGGA TTACAAAGTT 360  
 5 CAATTGCTCT AnCAATTGGA GCTAAGGCCG GGCAATATGT 400

(2) INFORMATION FOR SEQ ID NO: 3764:

(i) SEQUENCE CHARACTERISTICS:  
 10 (A) LENGTH: 610 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3764:

TTAAGTATT CCCAATTATA ATTCTTCATG ATTTCTTAT TGGATTTCGA ATTTGGTTTC 60  
 20 ATGCATTGAT GTCTCAAAGA ACATGATGAA CAGTCATCAC ATTCCATATAG TTTGAAGTCT 120  
 CGTTTAAAC CATATCTATC ATTACGGTAT GCATATCTTT TAAACCTAT TCTTTTGTTA 180  
 TTAGGACATA TAAATTCATT ATTAAGTTCG TCATATTTCC AATTTTGAGT GTTGAATAATG 240  
 25 CCACTTTTAA ACITTTCTAGT TTTATCTTTA ATAAACATGC CATACGTAAT AAGTGGCGTT 300  
 TTATTAATAAT CATCTATAAT AGCCATATAG TTTTGCTCAC TACCATAACC TGCATCAGCT 360  
 ACAATATACT CTGGTAAATA ACCGAAGGAT TTTGAATCAT TGTTAAAAAT GGGATTAAATG 420  
 30 TTCTAGTATC TGTGGGGTTT TGAAATAGGT CATAGGATAA AACAAATTGr GAATTTGTCG 480  
 CTATTTGgTA AATTGGTATC CTGGCTTAAG TTGGGCCATT TTCCATATG GGCCTTCCTT 540  
 35 CCATTTCCCA TAAAGTTGG CATCATGGAT CCAGATCCnG TTTTAGGAAA ACCTAATTC 600  
 AACCTTTAAG 610

(2) INFORMATION FOR SEQ ID NO: 3765:

(i) SEQUENCE CHARACTERISTICS:  
 40 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3765:

CTTCTGGTG CTGCATATCC CCTACAATAA TTAACCTTT TTCTTATTT AAAATGTGTC 60  
 50 TTAATGCCGA TGCACTATA CTTTTTGTAG AGTGCGGTAA AATCTTCATC TCAGAnGTTA 120  
 ACAAATCTGT TGCAATCAAA TCAGGTGTTA ACGGATCTCT AARTGGCAAG TTAATGAA 180

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CACAATGGTC TCTTTACTAT CATCCGCAAT AGGCATATCG AACTCATAnC TTACATAATT 300  
 ATTAACATA TTTACTTGAT TAATCGCTTG TGGTGGCCT ACanTTCTTA ATTCACGGGA 360  
 5 CGGTCACTTG TTAACACGGT TTAAGGTATT CTACTAATTn 400

(2) INFORMATION FOR SEQ ID NO: 3766:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 451 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3766:

ChTTTAACCT TTTTAAGGAA TCCTGCTAAT GCGGGTTTG GCATTTTCGA nTnTTTrGTA 60  
 20 tCTCACGCAA tCTTGTTGGT CATTGAGTTC GTATATGGCA TCCATTAAAG CGCGAAGATC 120  
 AAATGGACTA TTGATGACTT CTGGAATACC ACGATCTATA TTTAGTAATT GATAAACAGC 180  
 TTCCATGGCA GTACGAACCG AATATTCTGT TGTAAATACA GTGTCTCGCT CTGTTTCTGC 240  
 25 AAAGTTACCA ATAAATGCTA AGTTCGAGA TTGATCGGG ACGACTAAAG GTCTGTGCGC 300  
 GATAGCACGC GTCATGAAAT AAGATGTGAT ATATGGCATA TAAACAGGgA ATCGTATTAG 360  
 30 ATGCATGThT TGCTAAGTCT TCAATTTTGG TCAGTTGATA CACCTAAGTG GATACAGCCA 420  
 TTCTTGGCAT ATTTcATTAC CACTACATnC T 451

(2) INFORMATION FOR SEQ ID NO: 3767:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3767:

ACACGTGAAC GTCTTCAAAT GGAAGTACGT GACGTTCACT ACTCTCACTA TGGCCGTATG 60  
 45 TGTCAAATTG AAACACCTGA GGGACCAAAC ATTGGATTGA TTAACTCATT ATCAAGTTAT 120  
 GCACGTGTAA ATGAATTCGG CTTTATTGAA ACACCATATC GTAAAGTTGA TTTAGATACA 180  
 50 CATGCTATCA CTGATCAAAT TGACTATTTA ACAGCTGACG AAGAAGATAG CTATGTGTGA 240  
 GCACAAGCAA ACTCTAAATT AGATGAAAAT GGTCGTTTCA TGGATGATGA AGTTGTATGT 300  
 CGTTTCCGTG GTAACAATAC AGTTATGGCT AAAGAAAAAA TGGATTATAT GGATGTATCG 360

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## (2) INFORMATION FOR SEQ ID NO: 3768:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3768:

CCTACGACCG ATCGGTTAAC AGCCGATAGC TCTACCACTG AGCTACTGTG GATTAATATT 60  
 ATGCGCTGGCA ACGTTCTACT CTAGCGGAAa TAAGTTCGTA CTACCATCGA CGCTAAGGAG 120  
 CTTAACTTCT GTGTTCGGCA TGGGAACAGG TGTGACCTCC TTGCTATAGT CACCAGACAT 180  
 ATGAATGTAA TTTATACATT CAAAACCTAGA TAGTAAGTAA AAGTGATTTT GCTTCGCAAA 240  
 ACATTTTATT TGATTAAGTC TTCGATCGAT TAGTATTGCT CnGCTCCACA TGTCAACATG 300  
 CTTCCACCTC GAACCTATTA ACCTCATCAT CTTTGAGGGA TCTTATAACC GAAGTTGGGG 360  
 AAATCTCATC CTGnAGGGGG CTTCATGCTT AGATGCTTTC 400

## (2) INFORMATION FOR SEQ ID NO: 3769:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3769:

CTTGACCGAA GTTCTTACCT ACATCACCTA AATTAATGAC ATGTCCACCA GTCATATACT 60  
 CTAATCCATG GTGCGCGATA CTTCAACGA CAACATCTAC ACCACTATTT CTAATACAGA 120  
 ATCTTTCTnC TGCACTACCG TTAATAAATG CTTTACCCT TGTGCGACCA TAGAATGAGA 180  
 CGTTACCAGC AATAATTTCa TTTGTGCTT CTTCAAAAGG TGCTTTGACA ATGACCGTAC 240  
 CACCAGATAA TCCTTTACCA ACATAGTCAT TCGCATCTCC AGTATGATGA ATCATTAAGC 300  
 CTTTCGGTGC ATATGCTGCA GGACTTTGGA CCAGCATGAC CATTCGTATA AACATTAATT 360  
 GTATTTTCAG GGAGGTCCTG CTTCCTCATA TTGTTTCGGA 400

## (2) INFORMATION FOR SEQ ID NO: 3770:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3770:

5 CATTACGTAA TTAAAGATA GTCAATTAAGA GAGGnTGATA ACCATGCAAG AAGCATACAT 60  
 TGTAGCTTAT GGGCGTTCAG CGCAGCGAAA CAAAGCAAGG CGCATTATTC CACGAAAGAC 120  
 CTGATGATGT CGCAGCCAAA GTATTACAAG GCGTATTGAA ACGTATTGAC GGAAAATTCA 180  
 10 ATAAGAATAT GATTGAAGAT GTCAATTGTTG GTACGGCTTT TCCAGAAGGA TTACAAGGCC 240  
 AAAACATTGC ACGAACGATT GCATTGCGTG CGGGATTATC TGACACGGTA CCGGTCAAAC 300  
 15 AGTGAATCG CTACTGCTCA TCCAGGnTTT ACAAACCATT CGCGATTGCA GGCCAATCAA 360  
 ATTATGGCnG GTCCAAGGAG ATATACTTGT TAGCTGGTGG 400

## (2) INFORMATION FOR SEQ ID NO: 3771:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3771:

ACTCTCTGTC AnTAAGGGCA GGAATGACC GATGGGATTA AAAGATCAAG CTGTTACCTG 60  
 30 GGAAGGTAT TTTCATCAAT TTCCAGAACT ATCCGATAAA GAATTTAAGA CTACACAAAA 120  
 AATTAAAGAT ATTTTAACAG AACATCATAT TAGAATATTA GACTTACCAC TTGCGACTGG 180  
 35 GCTTGTTGCT GAAGTGGGAC AAGGTCTGAG TTGTATAGCT GTTCGGGCTG ACATTGATGC 240  
 TTTACCGATT CAAGAGCTTG TTGAACAGGA TTTTAAATCT GAAAATGAAG GTGTTATGCA 300  
 TCGTGTTGGT CATGATATTC ACATGGCTAG nATTTTGGCT ACAGCTGGTA AAATTAAGAAG 360  
 40 AGATTGAGGG CACTCTTACT GGGCGTGTTA AATCCATTG 400

## (2) INFORMATION FOR SEQ ID NO: 3772:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3772:

TTTATTTTGA CGTTTTAGAC ATAAAAAAGG GAGACCTTGC GGTCTCAATG CGGCTCATCG 60

GCTAAGAACC TTCTTGACT TGTGACAATC GCTTGCTTCT TTCCTCTTCT TCGGCTCTCG 180  
 CTTACTCATT TAGCTCTACT AAATCGTTG CGCTCTTTTC TCGTTTCGTC AGATTCAAAC 240  
 5 GTTTTCACTT CGCCAAGCCA TTTTCTTTG TGTTTGCTTT TTATTTTGAC GTTTTAGACA 300  
 TAAAAAAG AGACCTTGC GTCTCAATGC GGCTCATGC ATCCATTTT TGCCGGGCA 360  
 ACGTTCTACT CTAGCGGGAA CGGTAAGTTC GGACTTACCA 400

10 (2) INFORMATION FOR SEQ ID NO: 3773:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3773:

TTGATATTCC TGTACCACCT ATAATCGTTT TAATCGATGG GGGACGCAT AGGnATAGGC 60  
 GACGTGCGAT TGGATTGCAC GTCTAAGCAG TAAGGCTGAG TATTAGGCAA ATCCGGTACT 120  
 25 CGTTAAGGCT GAGCTGTGAT GGGAGAAGA CATTGTGTCT TCGAGTCGTT GATTTCACAC 180  
 TGCCGAGAAA AGCCTCTAGA TAGAAAATAG GTGCCCGTAC CGCAAACGA CACAGTAGT 240  
 CAAGATGAGA ATTCTAAGGT GAGCGAGCGA ACTCTCGTTA AGGAACTCGG CAAAATGACC 300  
 30 CCGTAACCTC GGGAGAAGGG TGCTCTTTAA GGTAAACGCC CAGAAGAGCC GCATGGAATA 360  
 GGCCCAACGA nGTTATTCA AAAACACAGT CTCTGCTAAA 400

35 (2) INFORMATION FOR SEQ ID NO: 3774:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3774:

TACTTAGACA ATCGAAAGTG TACATTATTA AATTATCATT TCCAGTTCTA CTCTACGGGA 60  
 ACGTAAGTTG GCTACCATCC TCGTAAGAA CCTTCTTGA CTGTGACAA TCGCTTGCTT 120  
 50 CTTTCTCTC CTTCGGCTCT CACTTACTCA TTTAGCTCTA CTAAACTCGT TGCCTTCTTT 180  
 TCTCGTTTCG TCAGATTCAA ACGTTTTTAC TTGCGCAAGC CATTTTCTT TGTGTTTGCT 240  
 TTTTATTTTG ACGTTTTAGA CATAAAAAA AGAGACCTTG CGGTCTCAA TGCGGCTCAT 300

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GACGCTAAGG AGCTTAACT TCTGTGTTC GGCATGGGA

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(2) INFORMATION FOR SEQ ID NO: 3775:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3775:

CGGTTTATCA AGAATGGAAA GAGTTGTACG TGAAGAATG TCAATTCAAG ATACTGAGTC 60  
 TATCACACCT CAACAATTAA TTAATATTCG ACCTGTTATT GCATCTATTA AAGAATTCCT 120  
 TGGTAGCTCT CAATTATCAC AATTCATGGA CCAAGCAAAC CCATTAGCTG AGTTAACGCA 180  
 TAAACGTCGT CTATCAGCAT TAGGACCTGG TGGTTTAAACA CGTGAACGGC TCAAATGGAA 240  
 GTACGTGACG TTCACTACTC TCACTATGGC CGGTGTGTCC AATTGAAACA CCTGAGGGAC 300  
 CAAACATTGG ATTGATTAA CATTATCAG TTATGCACGT GTAAATGGAA TTCGGCTTTA 360  
 TTGAAACACC ATATCGTAAA AGTTGATTG GntACACAGC 400

(2) INFORMATION FOR SEQ ID NO: 3776:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3776:

AGCTTACTTA CAGCTCCCA AAGCATATCG TCGTTAGTAA CGTCCTTCAT CGGCTTCTAG 60  
 TGCCAAGGCA TCCACGTCG GCCCTAATA ACTTAATCTA TGTTCCACC ATTTTATATA 120  
 GTCAAACGCT CACATACGGC TTCGTTTCA TTATTTTAAA TGCTCATTTA CATAAGTAAA 180  
 CTCIGCTTTA AAATAATTTA ACTCATTGTC TGCTAAACGT TTTCTTTTAT AAAAAGATTT 240  
 AAACGCGTTA TTAATCTTGT GAGTGTCTT TCGAACHTAG GCGATTATTT CTTATGGAAT 300  
 TCAAGCTTAT TTAAGACTCT TTATTCACCT GGTTTGCCT GGGTAAATC TAAATTTTAC 360  
 TTACnTATCT AGGTTTTCAA TGTACAAATA ATGGTGGGGC 400

(2) INFORMATION FOR SEQ ID NO: 3777:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs



(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3777:

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AATTATAAAA TTAATGGCG GTCTCGACGG GAATCGAACC CGCGATCTCC TGCCTGACAG      60
GCAGGCGTGT TAACnCTAC ACTACGAGAC CATTAGTAAA ACGGAGGAAG AGGGATTCTGA      120
ACCCCGCGGA GCGGTTAAGC CCCTGTCGGT TTTCAAGACC GATCCCTTCA GCCGGACTTG      180
GGTATTCCTC CAAAATTATA TGGACCTTGC AGGACTCGAA COTGCGACCG AACGGTTATG      240
AGCCGTAGC TCTAACCAAC TGAGCTAAAG GTCTTAATA TAATTTTACA ACTAATAAAT      300
AGTGGCGGTG GAGGGATCG AACCCCGGAC CTCACGGSTA TGAACCGTAC GCTCTAGCCA      360
GCTGAGCTAC ACGCCTTAT ATAGTTTGTA AATAATATGG      400

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(2) INFORMATION FOR SEQ ID NO: 3778:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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CAAATCCTGC ACCATCAGAA AGTGGGGCAG ATGTTCTCTG AGTCATAGTG CCGTCAGCTT      60
TAAATACTGT ACGTAATTG GCTAATGCCT CCATCGTGGT GTCAGGGCGT ATAAATTCAT      120
CTTGTCAAA GATATTTGTG TGTACTTTTG GTCTCGGCTT TGTATATTCA ACTGAGTTTA      180
CTTGTAATTG AATAATTTC TCTTTGAACC GACCATCAG TTGTGCGTCA TAGGCACGTT      240
GaTGACTTCT GACAGCATAA GCATCTTGA TTTGCGGTGA TACGTCAAAT TGGGATGCTA      300
CAITTTtCAG CAGTTAAACC CATAGGATAT GACGCACCTA TATCATCaA TTGTAAGGTT      360
GGATTGTTTG TGGCTTCGT TnGCCACnn TTGTACGGC      400

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(2) INFORMATION FOR SEQ ID NO: 3779:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3779:

CAATCTAAAT CGTTCAAATT TGGCACAACG ACAAATAAGG CTTCACACG AATATATTCT 120  
 CTCGGTTGAA ACCTTACTTA TTCATTATT TTTTATAAAT TAGTGACATA ACACTGTATT 180  
 5 AGCATCTGCA CGATCGGTTG AAATATATGT TACATTTTCT TGCTGCTTAA TAAATGCATC 240  
 ATAGTAATCA TATTGCGACG AATGATATGT GCCATTGAT GTATCAITTTG GGTTTAGCAA 300  
 10 ACAGCCATAA CCTTCGTCAT ATAAATGTTT ACnGAGCATA AGGGGCGTCA TGTTTATAGAA 360  
 CCACCTTACC TACATAAAAT TnGCTCCAT AGGGATCATA 400

(2) INFORMATION FOR SEQ ID NO: 3780:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3780:

ATGghCGGTC TCGACGGGAA TCGCAACCG CGATCTCCTG CGTGACACn CAGGCGTGT 60  
 25 AACCGCTACA CTACGAGACC ATTAGTAAAA CGGAGGAAGA GGGATTGAA CCCCCGCGAG 120  
 CCGTTAAGCC CCGTCCGTT TTCAAGACCG ATCCCTTCAG CCGACTTGG GTATTCTCC 180  
 30 AAAATTATAT GGACTTGCA GGACTCGAAC CTGCGACCGA ACGTTATGA GCCGTTAGCT 240  
 CTAACCAACT GAGCTAAAGG TCCTAAATAT AATTTACAA CTAATAATA GTGGCGGTGG 300  
 AGGGGATCGA ACCCCGACCC TCACGGGTAT GAACCGTAGC CTCTAGCCAG CTGAGCTACA 360  
 35 CCGCCTTATA TAGTTTGTA ATAATATGGT GGAGACTAGC 400

(2) INFORMATION FOR SEQ ID NO: 3781:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3781:

AACCACATCT TTATCAAGTT TCATATTCGG AATACCATAC ATTAATAAAC CGCCTGATTC 60  
 TCTAGCAGCT TCATAAATAG TTACTTGATA TCCTAGTAGA TTAAGTTCTT CAGCAGCAGC 120  
 50 TAATCTCTGT GGACCGCTTC CAACGATTGC CACTTTTTC TCTCTACGGC GACTCGGAAC 180  
 TTTCGGCGCT ACCCAACCAT TTTCAAAAGC TTCATCAATA ATGTGCGGTT CAATACCTTT 240

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TACACGCCCT GTAAAGTCAG GAAAGTTATT TGTTCGCTT AAGCGTCATA AGCAGTTTTA 360  
 AAATCTTGAT GATACACCAA GTCGTCCANT CAGGATGGAG 400

(2) INFORMATION FOR SEQ ID NO: 3782:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3782:

ACATGATGCG TGTGTTATTG GTTTTTATGC GAATATGGAT AATAAAAGGT CTCACGACAT 60  
 CATTGATAAA TCGCTTGAAA TGTTCGACG CTTAGATCAC AGGGCGGGG TCGGCGCAGA 120  
 TGGCATCACT GGTGATGGCG CAGGTATTAT GACTGAAATA CCTTTTGCAT TTTTCAAACA 180  
 ACATGTAACG GACTTTGATA TCCAGGTGA AGGTGAATAT GCCGTGGGGT TATTTTTTTC 240  
 CAAAGAACGC ATTTTAGGTT CTGAACATGA AGTAGTTTTT AAAAAATATT TTGGAAGGCG 300  
 AAGGGTTATC AATCTTGGT TAACGTAATG TACCAGTTAA TAAAGATGC CATTGCCTAA 360  
 ACCATGTAGC AGATACGATG GCCAGTCATT CCACCAAGTG 400

(2) INFORMATION FOR SEQ ID NO: 3783:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3783:

AATCGGGTGA TGTGGACGA TGATACGCAG GGAACGTTGC GTTATTCGTA TATGAAATAT 60  
 TGGATAACTG TTTTAACAAT GATGGTAGAG ATATTTTCATC ATTGTGAACA TCGCAATTT 120  
 TGATATTGTG ATGATTTAAC ATAACGACAT CATCGATATT GAATTGGTAT GAAAAACCTG 180  
 CTGTTGCTGA ATCTGTTAAT TTGGCTCCAA TATTTAAAAA TAAATCGCTG TTGTCCACAT 240  
 AATCTCGTAT TTTATCTTCG GCAATTTTCC CATGTAATAA ACCCATATAA TATGATTTT 300  
 CTCATTAAAG AGCACCTTTT CCTAATGAAA GTTGTGCTAC TGGGTATCTG TGTTTGANTT 360  
 ACAAAATCTT CAAAGTCCTG GATGGAGGTG AAAACTGTTA 400

(2) INFORMATION FOR SEQ ID NO: 3784:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3784:

10 GGTACTAAGA TGTTCAGTT CTCGGGTGT GCCTTCTGAT ATGCTATGTA TTCACATATC 60  
 GATAACATGA CATAACTCAT GCTGGGTTC CCCATTCGGA AATCTCTGGA TCAAAGCTTA 120  
 CTTACAGCTC CCCAAAGCAT ATCGTCGTTA GTAACGTCTT TCATCGGCTT CTAGTGCCAA 180  
 15 GGCATCCACC GTGCGCCCTT AATAACTTAA TCTATGTTT CACCATTITT ATAAGTCAAA 240  
 CGCTCACATA CGGCTTCGTT TTCAATTATT TAAATGCTCA TTTACATAAG TAAACTCTGC 300  
 TTTAAAAATA TTTAACTCAT TGTCTGChAA ACGTTTCTT TTATAAAAAG AnTTTAAACG 360  
 20 CGTTAATGAA GCTGTGAGTG TTCCTTCGAA CACGAGnnGA 400

(2) INFORMATION FOR SEQ ID NO: 3785:

25 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3785:

TACTGGAATG ACATCAGATA CATGTGCACC ACCAATCCAT TTCTTTTCAC CATTGATAAC 60  
 35 CCAAGTATCG CCTTGrCGTT CAGCGACTGT TTCAAGACCT CCCGCAACGT CCGAACCGTG 120  
 TTCTGGTTCA GTTAAAGCAA AGCATGTACG CAGTTCATGT GACTGTAAAT TAGGTACATA 180  
 TTTGCAATT TGTCTTTGC TACCTCCGAA ATAGAAAAGT TTATGCCCTA AACCTTGGTG 240  
 40 AACACCGAGT AGGAGTAGTA AGGAAATATC AAATCGCGCG AGTAGGTAAG ACATGAAAAA 300  
 CTGAAATAGT TGACTAGGCA TTTTGGCGTT TGGACGATCC TTGTAAAGTA ATGGATTGTT 360  
 AAAATAATTT AATTCTCCCA GTCTTTAAAT AGTCCCTCGG 400

45

(2) INFORMATION FOR SEQ ID NO: 3786:

55 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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TCAATTGACG AATTTCATTG TTATTCAAAA TTCTATCTAA TCGTGCITTT TCAACATTTA 60  
 ATATCTTACC TCGTAATGGT AAAATCGCCT GCGTCTAGA GTCACGACCA GATTTTGTAG 120  
 5 ACCCCCCGGC AGAGTCCCT TCGACTAAGA AAATCTACA TTCTTCAGGA CTTTTACTAG 180  
 AGCAATCGGC TAAATTACCT GGAAGCTTGC TACATCTAAC GCTGATTTAC GACGTGTTAC 240  
 10 TTCACGCGCT TTTTTCGCG CAACACGTCG ACGGCCCGCC ATAATACCTT TTTCACCAC 300  
 TGTACGTGCG ACTTGTGGGA TTTTCATATA AAAATCGTTC AAAGTGCTCT GAGAATAATT 360  
 TATCTACAAC TTGAGCACT TCAGAAATAC CTAATTTGT 400

(2) INFORMATION FOR SEQ ID NO: 3787:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 400 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3787:

25 TCTCTCCCG TTGCTCTGC CGCTACTAAG GGAATCGAa TTCTTTCTC TTCCTCCGG 60  
 TACTAAGATG TTTGAGTTCT CGGGGTGTGC CTCTGATAT GCTATGTATT CACATATCGA 120  
 TAACATGACA TAACTCATGC TGGGTTTCCC CATTGCGAAA TCTCTGGATC AAAGCTTACT 180  
 30 TACAGTCCC CAAAGCATAT CGTCGTTAGT AACGTCTTTC ATCGGCTTCT AGTGCCAAGG 240  
 CATCCACCGT GCGCCCTTAA TAACTTAATC TATGTTTCCA CCATTTTAT AAGTCAAACG 300  
 TTAACATGAA GTTACGTTCT TTTATAAAAA GATTTAAAGC CGTTATTAAAT CTTGTGAGTG 360  
 35 TTCTTTCGGA CACTAGCGAT TATTTCTnAT GATnCAAGCT 400

(2) INFORMATION FOR SEQ ID NO: 3788:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 400 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3788:

45 ATTCTCTGCT TTAATCTCAT TTGGTACTA ATACCTGAT TTTGTCCAAG TAAATGCTTC 60  
 50 ATAAAGTATT CTTGACCTTT TGCAGAACTT GAAATTAAGT TTGAACGCCA TATATAATGA 120  
 TTTTGATGA TTCTTTTCA AATCAGGATC TCTATTGCAA ATTGTGTTTG TnTTGATTTTC 180

TCTTCTGCAA ACAACAACT ATTTTATTATA AATTGTGGAT ATGATGGTAA CCAACCAAGT 300  
 CTAGCTGCTA AnACATTATA ATCAGCTGGA TGTGTATGCT TTAACCTCTC TGTTTTAGCT 360  
 5 AATGGAGATT TTAACGATC TACATTGAC TCTTCATAAT 400

(2) INFORMATION FOR SEQ ID NO: 3789:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 10 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3789:

CGGTTTCTTA ATTATGAACG CAACTATGAA TGGCTTATTA ACTATCACGG GCACATTGGC 60  
 20 AAAAGATCAG CTTGCACAAA ATGGACAAGG CATGGTGCTC GGTATACAAA CGTTGAAAC 120  
 CGGTGTTTT GCGCGGATTA TCACAGGTAT TATGACCGCA ATACTTCACA ACAAAATATCA 180  
 CAAAGTGTA TTACCACCGT ATTTAGGTTT CTTGTGTGGC TCTAGATTTC TCCCTATTGT 240  
 25 CACAGCAITTT GCGCAATCT TTTTAGGTGT ATTGATGTTT TTCATTGGC CAAGCATACA 300  
 nGCCGGCAIT TATCATGTTG GTGGGATTGT TAACGAAAAC AGGTGCCATC GGTACTnITG 360  
 TTTATGGGTT CATCTTTAGG ATTGTTAGT CCACTCGGIT 400

30 (2) INFORMATION FOR SEQ ID NO: 3790:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 716 base pairs  
 35 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3790:

ATAATGGACT GTGCCGnGTA ATAATATnGn TCTCTAAAAG TTGTATTITA AAAATAGTTC 60  
 TTAAATATAT ATACCACCA CATTGTGTGA kGAACCTAAA AAAAAGCACT TCCCAAAAAT 120  
 45 GGAAAGTGCA AGTAGTGAGC CATAGAGGAT TCGAACCTCT GACCCTCTGA TTAAAAGTCA 180  
 GATGCTCTAC CAACTAGACT AATGGCTCTA ATGGCTGGGC TAGCTGGATT CGAACCAACG 240  
 AGTGACGGAT CAAAGTCCG TTGCCTTACC GCTTGGCTAT AGCCaATATA TAGATGGTGG 300  
 50 AGGGGGGCAG ATTGCAACTG CCGAACCGA AGAGCGGATT TACAGTCCGC CGCGTTTACC 360  
 ACTTCGCTAC CCCTCCAGCT TATTATATA ATTTAATAAT CAAAATGGTG GAGAATGACG 420

55

CAAAATAATG ACTCCTACGG GACTCGAACC CGTGTACCG CCGTGAAAGG GCGTGTCTTT 540  
 AACCGTTGAC CAAGGAGCCA TGGCTCacCA GGTAGGATC GAACCTACGA CCGATCGGTT 600  
 5 TAACAGCCGA TAGCTCTACC ACTGAGCTAC TGTGGGATTA ATATTATGCC TGGCAACGTT 660  
 CTACTCTAGC GGAACATAAG TTrGAACTha CCATCGACGC TAAAGGAGCT TAACTT 716

(2) INFORMATION FOR SEQ ID NO: 3791:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3791:

20 TGTCATGACG TTATTGAAG ATATCGCGCA AGTCTTTTTA AAGGTAACAC TATCATTTAT 60  
 GCAATACGGC GCAATTACCAG AGTTGCATGG TCAAAATATA TTGTTGTCAT TTGAAGATGG 120  
 ACGTGACAA AAATGCCGTGT TACGTGATCA TGATACTGTC AGAATTTATA AACCATGGCT 180  
 25 AACAGCACAT CAGCTTTCAT TGCGAAGTA TGTGTCAGA GAAGATACAC CTAATACGCT 240  
 AATTAATGAG GATTTGGAAG CATTCTTTGC nTGATTTTCA AACATTAGCT GTGATCGGTA 300  
 AATCTATATG CCAATTATTG TGCAATTCCA AGATTTATTT GGTGTGAAGT GnAGCATGAA 360  
 30 CTTATGTCGT TGTTAAACA AATTTTGAAA AAAGGAAGTG 400

(2) INFORMATION FOR SEQ ID NO: 3792:

35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 425 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3792:

40 TTTTCACACA ATACATGGAC ACCATGGTTC AATGCTTCTA TAGAAAGATC AGCATGGAAT 60  
 45 TTATTAGGTG TACAAATGAC CACCGCATCA ACAAGTTTAA ACAGCTCGCT AGGTGTCTCA 120  
 ACTGCATGAG GTATATTAAA GCGCTTCGCA ACATCAATCA TCTGCACTGT ATTAATATCT 180  
 TGTACTGCAA CTAATGAGAC TGTGCTTTTG AGTTTCAGCA ATGCTGGAAT ATGACGGTCT 240  
 50 TGTGCAATAC CACCAACACC TATCACACCA ACTTTTAATT TTGTCATGAT GTGCTCTCTT 300  
 ACCGTATGAT GTLATTCAAA GTAAATTGCT TTGCTGATT TKGAGACTG ATaAATYGCT 360

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TACCA

425

(2) INFORMATION FOR SEQ ID NO: 3793:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3793:

15

GATGCTCTAC CAACTGAGCT AATGGCTCTA ATGGCTGGGC TAGCTGGATT CGAACCAACG	60
AGTGACGGAG NAAAGGTCGG TTGCCTTACC GCTTGGCTAT AGCCCAATAT ATAGATGGTG	120
GAGGGGGGCA GATTCGAACT GCCGAACCCG AAGGAGCGGA TTTACAGTCC GCCGCGTTTA	180
GCCACTTCGC TACCCCTCCA GCTTAITCAT ATAATTTAAT AATCAAAATG GTGGAGAATG	240
ACGGGTTTGA ACCGCGGACC CTCTGTTTGT AAGGCAGATG CTCTCCGAGC TGAGCTAATT	300
CTCCAAAATA ATGACTCTTA CGGACTCGA ACCCGTGTTA CGCCCGTGAA AGGCGGTGT	360
CITAAACCGCT TTGACCAAGG AGCCATGGCT CCACAGGTAG	400

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(2) INFORMATION FOR SEQ ID NO: 3794:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3794:

40

ATCAGCAGGG TTGAAAGTAC CTGCTGCAAC AGTAATACCA TTATTAGTTC CAGCAATACC	60
TGCTACAGTT GCTGCAGATG CTTCTTTCAC CCATGGACTC GTATTATTGC GACGTGTAAG	120
TGTnTCACAA CGTTACCATT ACGTTAATA ACTAATTTAT CAGCGTATGT CGTTACGTTA	180
CCGGCATGTG TATTCAGTGT TTGGTTTGCT CCAGGTGCAA TTGTAATCGC TCCTGCGGCT	240
GTTTCAGTCA CAGTTGGITT CGCTGGTTGC ACATCTTTTA CTACAAATTT CGCTGGTAAA	300
GATGTTGCAA AAGTATGTCC GTTAGATG AGTCCATAT TTGCGTTAA CGACTTTAGC	360
CACATTCGGT TTATTATAG CGGACCAGTT TCGCTCCATT	400

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(2) INFORMATION FOR SEQ ID NO: 3795:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs



(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3795:

	GCGCCGAAAA TGTACCGGG CTAACATAT TACCGAAGCT GTGGATTGTC CTTGGACAA	60
10	TGTTAGGAGA GCGTTCTAAG GCGTTGAAG CATGATCGTA AGGACATGTG GAGCGCTTAG	120
	AAGTGAGAAT GCCGGTGTGA GTAGCGAAAG ACGGGTGAGA ATCCCGTCCA CCGATTGACT	180
	AAGTTTCCA GAGGAAGGCT CGTCCGCTCT GGGTTAGTCG GGTCTTAAGC TGAGGCCGAC	240
15	AGCGGTAGGC GATGATTAAC AGGTTGATAT TCCTGTACCA CCTATAATCG TTATAATCGAT	300
	GGGGGACGC AGTAGGATAG GCGAACGTGC CATTGTATTG CACGCTCTAA GCAGTAAAGC	360
20	TGAGTATTAG GCAATCCGG TACTCGTnA AGGCTGAAC	400

(2) INFORMATION FOR SEQ ID NO: 3796:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3796:

	GCACATGTTG CCATgCTTGA GCTAAATTAC CTTGCATCAT TGCTAGCTTT TCTTGATTA	60
	ACTGATATTT ACTAATTGGT TTGCCGAATT GCTTACGCTC AGTGACATAA TCTAATGTGG	120
35	CACGTAAAGC GCCACCATAC CACCTGTAGC CATATAAGCA ACGsCTGCTC TCGTTGAATA	180
	AAGAATTTTG GCAATATCTT TAAAGCTTGT TATGTTTTGT AAGCGATCG CTTTCTCTAC	240
40	TTTGACATTA GTTAATTAA TTAGGGCGTT AGGAACAATG CGAAGTGCGA TTTTATTATC	300
	AATGACTTCA ATATCGACGC CATCTTGTTT TGGTCTGACT ACAAAGCAAT GGGGTTTGCC	360
	AGTTTCnGTT ATTACTGCG AATACTGGGG GGGnGnGGTT	400

(2) INFORMATION FOR SEQ ID NO: 3797:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3797:

5 GGAACACCAG TGGCGAAGGC GACTTTCTGG TCTGTAAC TG ACGCTGATGT GCGAAACGTG 120  
 GGGATCAAAC AGGATTAGAT ACCCTGGTAG TCCACGCCGT AAACGATGAG TGCTAAGTGT 180  
 TAGGGGGTTT CGGCCCTTA GTGCTGCAGC TAACGCATTA AGCACTCCGC CTGGGGAGTA 240  
 CGACCGCAAG TTGAACTCA AAGGAATTGA CGGGGACCCG CACAACGGTG GGAGCATGTG 300  
 10 GTTTAATTTC AAGCAACGHA GAGAACCTTA CCAATCTTTG ACATCCTTTT GACACTCTAG 360  
 GAGATAGAGC CTTCCCTTCG GGGGGACnAA GTGACAGTTG 400

(2) INFORMATION FOR SEQ ID NO: 3798:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3798:

25 CACAAAACAA GCCAAGCAAA ACAAACGCAT ATAACGTAAC AACACATGGA AACGGCCAAG 60  
 TATCATATGG CGCTCGCCCA ACACAAAACA AGCCAAGCAA ACAAATGCA TACAACGTAA 120  
 CAACACATGC AAACGGTCAA GTGTCATACG GAGCTCGCCC GACATACAAG AAGCCAAAGTA 180  
 30 AAACAAATGC ATACAATGTA ACAACACATG CAGATGGTAC TGCACATAT GGGCCTAGAG 240  
 TAACAAAATA AGTTTGTAAC TCTATCCAAA GACATACAGT CAATACAAAA CATTACGTAT 300  
 CTTTACAACA GTAATCATGG CATTCTATGG ATGCTTCTAA CTGGAATTAA AGCATCGGAA 360  
 35 CAATCGGGAN GCATATTTCT AAAATTATTT ATTCCATTAT 400

(2) INFORMATION FOR SEQ ID NO: 3799:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3799:

50 CTTGCGCAT ATGGGGGAAG CTAGGTGATA AGATCAGCCG AAAATGGATG GTGTTAAGAG 60  
 CGTTACTTGG TTGTCGGGTA TGCTTATTTT TAATGGCATT GTGTACGACA CCATTACAGT 120  
 TTGTACTTGT GAGGTATTG CAGGGACTAT TTGGTGGTGT TGTGTATGCA TCAAGTGCCT 180  
 TTGCGAGTGC AGAGGCGCCA CTGAAGGATC GTGGAAAGGT ATTAGGAAGA CTGCAAAAGT 240

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TTTtagTGCg TtactGATga GTATTGCCGT TATTACTTTT ATTGTCTGtn TTTTCGtGC 360

CATTAAAATG ATTGAAACGA CACATATGGC CAAAnnCACA 400

5 (2) INFORMATION FOR SEQ ID NO: 3800:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 400 base pairs

(B) TYPE: nucleic acid

10 (C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3800:

15 GGAATCTATT ATATTAGATG TAAAAAATTT CGCGCAAAAT GTGTAGGTA AAGGTGTCAT 60

TGTCGTCaAT GaTGTGCCTG GCTTTGTGCG AAATAGAGTC GGCACGCAAA CAATGAATGA 120

20 TATTATGTAT CGCGCCGAGC AACACAAGAT AAGCATTGTA GATGTGGATG CTTTAACTGG 180

GCAAGCGATT GGTGTCCTA AAACAGGTAC ATATGCGCTA TCTGACCTAG TCGGTTTAGA 240

TATTGCAGTG TCTGTAAATT AAAGGCATGC AACAAGTACC TGAAGAAACA CCTTATTTTC 300

25 ATGATGTCAA AATGTAAATA CGTTGTTTGA CCATGGGCGC ACTCGGACGT TAAnnCGnAA 360

ACCAAGGGTT TTTACCAAAA AGGGTTAAAG GgnAACTTAA 400

(2) INFORMATION FOR SEQ ID NO: 3801:

30 (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 400 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: double

35 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3801:

40 TGCAGGCGTT TCTGGTCTGC ATAGTTTACG CATACGACCT GCGCGATCCT TATCTGGTAA 60

TAAATTGTAA AACGATAGTT CCCGTGTTC CTAATAGTTG TATTCTATCT GACGCATAAT 120

45 GTGAAAAATA ACCTGCCATC TCTAAGCCCG GTCTTGATAT ATCAGCATT TTAATTGGCT 180

TCGATAGTCC TTCTTACCA GCGATTAAAT CTAACITTAA TGTTTCAACT AGTTTTCCTG 240

TCGTTAACAT GGGTTCACCT CAATTGTATT TACCCTACTC TTACATCTCT TCTTATCATA 300

50 TCAAAAATAT AACACCAATC TACATTGAAA AGCTAAAnTA AATATTAAATG TTCATTATTG 360

TTATnATTTT ACAAGTCAAT ATCATATAA TTTATGCTG 400

(2) INFORMATION FOR SEQ ID NO: 3802:

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(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3802:

10 TTTCACITTTT GAACCATGCG GTTCAAAATG ATTATCCGGT ATTAGCTCCG GTTCCCGAA 60  
 GTTATCCAG TCTTATAGGT AGGTATATCCA CGTGTACTC ACCCGTCCGC CGCTAACATC 120  
 AGAGAAGCAA GCTTCTCGTC CGTTCGCTCG ACTTGCATGT ATTAGGCACG CCGCCAGCGT 180  
 15 TCATCTGAG CCAGGATCAA ACTCTCCATA AAAATTATGA TGTTTGATTA GCTCAATAAT 240  
 ACTAAATAAT GTTTGTAAC TATAGTTACG TTTTITGGAA TTAACGTTGA CATATTGTCA 300  
 TTCAGTTTTC AATGTTTCATT TTTCTTACCG ACAAGAATTA ATTATACATT TTATTAACAT 360  
 20 TTAAGTCAAT AACTTTTnTTT ATCTGTCCA TTTnATTTTT 400

(2) INFORMATION FOR SEQ ID NO: 3803:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3803:

TAGTACCAG ACATATGAAT GTAATTTATA CATTCAAAC TAGATAGTAA GTAAAAGTGA 60  
 35 TTTTGCTTCG CAAACATTT ATTTTGATTA AGTCTTCGAT CGATTAGTAT TCGTCAGCTC 120  
 CACATGTCAC CATGCTTCCA CCTCGAACCT ATTAACCTCA TCATCTTTGA GGGATCTTAT 180  
 40 AACCGAAGTT GGGAAATCTC ATCTTGAGGG GGGCTTCATG CTTAGATGCT TTCAGCACTT 240  
 ATCCCGTCCA CACATAGCTA CCCAGCTATG CCGTTGGCAC GACAACTGGT ACACCAGAGG 300  
 TATGTCCATC CCGGTCCTCT CGTACTAAGG ACAGCTCCTn TCAAAATTCC TACGnCCAGn 360  
 45 ACGGATAGGG ACCGAACCTGT TTTCACGACG GTnCTGAACC 400

(2) INFORMATION FOR SEQ ID NO: 3804:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 457 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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AGTnCACTCA CnCCAGATGT TTAAGTCCTG TCGTCTGCC AGTTCGCCA CCCGGGCACT 60  
 ATAAAAATGG AGCAGAAGAC GGGATTGGA CCCGGGACCC CAACCTTGCG AAGGTTGTAT 120  
 5 TCTACCGCTG AACTACTTCT GCATATGCGG GTGAAGGGAG TCGAACCCCC ACGCCGTAAG 180  
 TTAGwATCCT AAGTCTAGTG CGTCTGCCAA TTCCGCCACA CCCGCAATG GTGAGCATA 240  
 GAGGATTGGA ACCTCTGACC CTCTGATTAA AAGTCAGATG CTCTACCAAC TGAGCTAATG 300  
 10 GCTCTTCCTT GGTGCGGCGC AGAGGACTTG AACCCCCAAC CTACTGATTA CAAGTCAGTT 360  
 GCTCTLACCA ATTGAAGCTAG GCGGGCAATA TGTaAGAATA AATGCTGGAG AATGACGGGT 420  
 15 TTCGAAACCG CCGnACCCCTC TGCTTTGTTA AGGGCAG 457

(2) INFORMATION FOR SEQ ID NO: 3805:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3805:

ACTTTTTATT TTGACGTTTT AGACATAAAA AAAGCTCACG GTCTCAACTT GCCTGGCAAC 60  
 GTTCTACTCT AGCGGAACGT AGTTGGCTAC CATCGTCGCT AAAGACCTTT CTTGACTTGT 120  
 30 GACAATCGCT TGCTCTCTTC CTCTCCTTCG GCTCTCGCTT ACTCATTTAG CTCTACTAAA 180  
 CTGTTGCGC TCCTTTCTCG TTTCGTGAGA TTCAAACGTT TTCACTTCGC CAAGCCATTT 240  
 35 TTCTTTGTGT TTACTTTTTA TnTTGACGTT TTAGGCATAA AAAAAAGAGA CCTTGCCTGC 300  
 TCAATGCGGC TCATCGCATC CATnTTTTGC CGGGCAACGT TCTACTCTTA GCGGAACGTA 360  
 AGTTGGCTAC CATCGTCGCT AAAGACCTTT TTGACTGTG 400

(2) INFORMATION FOR SEQ ID NO: 3806:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3806:

GTATGAAG TCGCGCTTAA AATGCGTTAA TGTGACAAGG ATAATTCAC ATCGTTTCA 60  
 TTTACTGAGT CATTCACATT ATCATACACA TTATATTAG CATGAGTTAT ATTACTAAAA 120

TCATTGGCTT AATATTACA GCGCTTGGTA TTGCAGGTGC CGTATTACCT TTACTGCCAA 240  
 CGACCCCTTT TTTACTCGTA GCAGTTTTTT GCTTTGCTCG AAGTTCAGAT CGCTTTTACA 300  
 5 ATTGGGCGnna TTAATCAAAA AATTATATAA GAATATGTAG AAAACCTTTn TTTGACATCG 360  
 AGGCTACACG CTACAACAGA AAATTGAAAA TTTAATTAGC 400

10 (2) INFORMATION FOR SEQ ID NO: 3807:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 388 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3807:  
 20 AGGAGAACAT GCTGTTACAT TTGAGAGGCC TGCTATTGCA GTGACCGTTT AACGCAGGTA 60  
 AAATCAAGT TTTAATAGAA GCCTTAGAGA GCGGGAACTA TTCGTCATT AAAAGCGATG 120  
 TTTACGATGG TATGTTATAT GATGCGCCTG ACCATCTTAA GTCTTTGGTG AACCGTTTTG 180  
 25 TAGAATTAAA TAATATTACA GAGCCGCTAG CAGTGAACGA TCCAAACGAA TTTACCACCA 240  
 TCACGTGGAT TAGGATCGAG TGCCAGCTGT CGCGGTGCT TTTGTTCTGT CAAGTTATGG 300  
 30 ATTTTTIAGG GnaAATCATT AACGAAAGnA AGAACTCATT GGAAGGCT nATTGGCCA 360  
 GAAGCAAATT GCCACATGGT AAAACCAA 388

(2) INFORMATION FOR SEQ ID NO: 3808:

35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 447 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3808:  
 40 ATGCGCAGAG TATATGGAGG AACACCAGTG TCGAAGCGCA CTTTCTGGTC TGTAAGTGAC 60  
 45 GCTGATGTGC GAAACGTGkG GGATCAAACA GGATTAGATA CCCTGGTAGT CCACGCCGTA 120  
 AACGATGAGT GCTAAGTGT AGGGGGTTTC CGCCCTTAG TGCTGCAGCT AACGCATTAA 180  
 GCACTCCGCC TGGGGAGTAC GACCGCAAGT TgAAAACCTCA AAGGfATTGA CGGGGACCCG 240  
 50 CAcAAGCGTG GGAGCATGTG GtTTAATTG AaGCAACGnn GAGGAACCTT ACCAAATCTT 300  
 GACATCCTTT GACAACTCTA GAGATAGAGC CTTCCCTTC nGGGAACAAA TGACAGGTGG 360

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ACCCCTAAGC TTATTGCGCA TCATTAA

447

(2) INFORMATION FOR SEQ ID NO: 3809:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3809:

15	CCAACTGAGC TACTGAACCA TAATAAAAT GTAATGACTG GCGGTCTCGA CGGGAATCGA	60
	ACCCGCGATC TCCTGCGTGA CAGGCAGGCG TGTAAACGCG TACACTACGA GACCTATAAA	120
	ATATTGCGGG AGGCGGATTT GAACCACGGA CCTTCGGGTT ATGAGCCCCG CGAGCTACCG	180
20	AACTGCTCCA TCCCGGATA ATAAAAATA ATGGCGGAGG AAGAGGGATT CGAACCCCG	240
	CGGCCGTTA AGGCCCTGTC GTTTTCAAG ACGATCCCTC TCAGCCGGAC TTGGGTATTC	300
	CTCCATTATT ATAGGTAAAT CGCTATTAAT TATAAAATTA AATGGCGGTC TCGACGGGAA	360
25	TCGAACCCGC GATCTCCTGC GTGACAGGCA GCGTGTTAA	400

(2) INFORMATION FOR SEQ ID NO: 3810:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3810:

	TGCTTGGTAA AATCTATATT TTAATTACTT ATCTAGTTTT CAATGTACAA ATAATGGTGG	60
40	GCCTAAGTGG ACTCGAACCA CCGACCTCAC GCTTATCAGG CGTGCCTCT AACCAGCTGA	120
	GCTATAGGCC CATTTTTTTG AATGTTAAAT AAACATTCAA AACTGAATAC AATATGTCAC	180
	GTATTTCGCG ATCTTCTGAA GAAGATGTTT CGAATATATC CTTAGAAAGG AGGTGATCCA	240
45	GCGCACCTT CCGATACGGC TACCTTGTTA CGACTTCACC CCAATCATTT GTCCACCTT	300
	CGACGGCTAG CTCTAAAAG GTTACTCCAC CGGCTTCGGG TGTACAAAC TCTCGTGGTG	360
50	TGACGGGCGG TGTGTACAAG ACCCGGGAAC GATTACACCG	400

(2) INFORMATION FOR SEQ ID NO: 3811:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 380 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3811:

	GCTTCATGCT TAGATGCTTT CAGCACTTAT CCCGTCACA CATAGCTACC CAGCTATGCC	60
10	GTGGGCACGA CAACTGGTAC ACCAGAGGTA TGTCCATCCC GGTCTCTCG TACTAAGGAC	120
	AGCTCCTCTC AAATTTCTTA CGCCACGAC GGATAGGGAC CGAACTGTCT CACGACGTTT	180
	TGAACCCAGC TGGGTACCG CTTTAATGGG CGAACAGCCC AACCTTGGG ACCGACTACA	240
15	GCCCCAGGAT GCGATGAGCC GACATCGAGG TGCCAAACCT CCCCGTCGAT GTGGAACCTT	300
	TGGGGGAGAT AAGCCTGTTA TnCCCGGGGT AGCTTTTATC CGTTGAGCGA TGGnnCTTCC	360
	ATGCGGGAAC CACCGGATT	380

20

(2) INFORMATION FOR SEQ ID NO: 3812:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 386 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3812:

	GAGGGATCTT ATAACCGAAG TTGGGAAATC TCATCTTGAG GGGGGCTTCA TGCTTAGATG	60
	CTTTCAGCAC TTATCCCGTC CACACATAGC TACCCAGCTA TGCCGTTAGC ACGACAACCTG	120
35	GTACACCAGA GGTATGTCCA TCCCGTCTCT CTGCTACTAA GGACAGCTCC TCTCAAATTT	180
	CCTACGCCCA CGACGGATAG GGACCGAAGT GTCTCAGAC GTTCTGAACC CAGCTCGGCT	240
	ACCGCTTTAA TGGGCGAACA GCAACCCCTT GGGACCGACT ACAGCCCCAG GATGCGATGA	300
40	GCCGACATCG AGGTGCCAAA CCTCCCGCTC GntGTGAAC CTGGGGGAG ATAAGCTGTT	360
	ATCCCCGGGT GAGnTTTnTC CGTTGA	386

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(2) INFORMATION FOR SEQ ID NO: 3813:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3813:

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CITGGTACTT CTGSGTTGG TGGCGTTGGT GTTCCGGCT CACTTGGTAC TTCTGGTGTC 120  
 GGTGGCGTTG GTGGCAGCAT TGGAGGTGTT GTATCTCTT CAATCGTTTG TTGACCTTCA 180  
 5 TTTTGCCCGC TTACTTTTGG AAGTGTATCT TCTTCAAAGT CAACACTATT GTGTCCACCG 240  
 AATTGATAAC TTGGTTTATC TTTATTGTGA TCTTCTTCAA TAATTTCAGT GTGCTTATTG 300  
 10 AATCCGTGAA TATGTGGCAC nTGGTCGAAG TCGATATCAA TGATGTTACC GCCATGTTCA 360  
 TACTTAGGTT TGTCTTTTTC TGTAnCTTCC TCGAATGACT 400

(2) INFORMATION FOR SEQ ID NO: 3814:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3814:

TAATTGGGCT ACCATCGTCG CTAAGACCT TTCTTGAAGT GTGACAATCG CTTGCTTCTT 60  
 25 TCCTCTCCTT CGGCTCTCGC TTACTCATTT AGCTCnACTA AACTCGTTGC GChCTTTTCT 120  
 CGTTTCGTCA GATTCAAACG TTTTCACTTC GCCAAGCCAT TTTTCTTTGT GTTTACTTTT 180  
 TATTTTGACG TTTTAGGCAT AAAAAAAGA GACCTTGGCG TCTCAATGCG GTCATCGCA 240  
 30 TCCATTTTTT GCCTGGCAAC GTTCTACTCT AGCGGAACGT AAGTTGGGCT ACCATCGTCG 300  
 CTAAGACCT TTCTTGACTT GTGACAATCG CTTGCTTCTT TCCTCTCCTT CGGCTCTCGC 360  
 35 TTACTCATTT AGCTCTACTA AACTCGTGC GCTCTTTTCT 400

(2) INFORMATION FOR SEQ ID NO: 3815:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3815:

TTCTTTCATA TGATTTTTTA GATTTTAGTA AGTCAATAAA GCCAATTTTC TCCAACGATT 60  
 GAATGTAACG TTGATTGATA AATGTATTTC TTGGTAAATC ACCACCGCTG AAAATTGTGG 120  
 50 CGATATTTAA GGCAATATGA TAATCATGGT CGCTAATAAA ATGACCCCGT CTTTGCGCAT 180  
 CTAATTGTCC TTGGATCAAT GCTTTGAAGT CTTACCTTAA AGCGATATAT TGATGTCTAG 240

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5 GTTGTGCTGT ATTGAAATA ATCGTATCTG GTATCAGTA AATnACCATA ACGACGTGCC 360  
 TCCAAAGGCA TTGGTAnGA GCCTTCGGCA ATGCCGATAA 400

(2) INFORMATION FOR SEQ ID NO: 3816:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3816:  
 CCAATATTTA TATTAATGAA AATAAGATGT TATATTCATT GTTAATTAA CACATAGTAA 60  
 GAnAAACAGT CATAAATGGA TTCTAATTG AAATCATCTT ATGACTGCTT TTTATTATAC 120  
 20 TTACATTTTC TCGTTTCGTC AGATTCAAAC GTTTTCACCT CGCCAAGCCA TCCTTCTTTG 180  
 TGTTTGCTTT TATTTTGACG TTTTAGACAT AAAAAAGAG ACCTTGCGGT CTCAATGCGG 240  
 CTCATCGCAT CCACTTTTTG CTGGCAACG TTCTACTCTA GCGGAAnTAA CTCGGACTAC 300  
 25 CATCGACGT AAGGAGCTTA ACTTCTGTGT TCGGCATGGG GAACAGGTGT GACCTCCTTG 360  
 GCTATAGTCA CCAGACATAT GAATGTAAAT TCATACATTC 400

30 (2) INFORMATION FOR SEQ ID NO: 3817:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3817:  
 TGTATTGTTT CAAATCATG ATCAAGATCA GTATATCGGG GGGnATTATG AAGCGATGCA 60  
 TACATTATCA CATAAATAGA TTAATCACA ATTACGTATG ACCTTACCGG AGTACATGAT 120  
 45 ACCAGTTAAT TTATGCATA TTGAGCAAAAT TCCTATTACT ATTAATGGGA AATTAGATAA 180  
 GAAGGCATTG CCTATCATGG ACTATGTCTGA TACGGATGCC TATGTAGCAC CGAGTACAGA 240  
 TACCGAACAC TTGCTATGCC AAATTTTTGC AGATATTTTA CATGTGAATC AAGTAGGTAT 300  
 50 TCATGATAAT TTCTTTGAAT TAGGTGGCCA TTCATTAAAA GCAACGTTAT GgnTGAATC 360  
 GGATAGAGGC ATCTACTGGG GAAACGATTA CCAATTGGGG 400

55 (2) INFORMATION FOR SEQ ID NO: 3818:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3818:

10	TCGGAATCTG GGAGGACCAT CTCCTAAGGC TAAATACTCT CTAGTGACCG ATAGTGAACC	60
	AGTACCGTGA GGAGAAGGTG AAAAGCACCC CGGAAGGAAG TTGAAATAGA ACCTGAAACC	120
	GTGTGCTTAC AAGTAGTCAG AGCCCCGTAA TGGGTGATGG CGTGCCCTTT GTAGAATGAA	180
15	CCGCGAGTT ACGATTGAT GCAAGGTAA CAGATAATG TGGAGCCGA GCAnAACATG	240
	TTCTGAATAG GCGCTTTAGT ATTTGGTGGT AGCCGnAAAC CAGGTGATCT ACCCTTGGTC	300
	CAGGTGAAAG TTCAGGTAACT ACTGGAATGG AGGACCGAAC CGACTTACGT TTGAAAGGTG	360
20	AGCGGATGAA CTGAAGGTAG CGGAGAAATT CCCAATCGAA	400

(2) INFORMATION FOR SEQ ID NO: 3819:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3819:

	CAACGAGAGA CTCGGTGAAA TCATAGTACC TGTGAAGATG CAGGTACCC GCGACAGGAC	60
35	GGAAAGACCC CGTGGAGCTT TACTGTAGCC TGATATTGAA ATTCGGCACA GCTTGTACAG	120
	GATAGGTAGG AGCCTTTGAA ACGTGAGCGC TAnTTACCTG GAGGCGCTGG TGGATACTA	180
	CCCTAGCTGT GTTGGCTTTC TAACCCGCAC CACTTATCGT GGTGGGAGAC AGTTTCAGGC	240
40	GGCGAGTTTG ACTGGGGCGG TCGCTCCTA AAAGGTAACG GAGGCGCTCA AAGGTTCCCT	300
	CAGAATGTTT GGAATCATT CATAGAGTGT AAAGGCATAA GGGACTTGAC TCGGAGACCT	360
45	ACAAGTCGAG CAGGTCCAAA AACGGACnTA GTGATnCGGT	400

(2) INFORMATION FOR SEQ ID NO: 3820:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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TGGCTOGAAC CACGACCTC ACGCTTATCA GCGTCGCTC TAACAGCTG AGCTATAGGC 60  
 CATTAAATTG AATGAACAAA CATTCAAAC TGAATACAAT ATGTACGTT ATTCCGCATC 120  
 5 TTCTGAAGAA GATGTTCCGA ATATATCCTT AGAAAGGAGS TGATCCAGCC GCACCTTCCG 180  
 ATACGGCTAC CTGTTCACGA CTTACCCCA ATCATTGTG CACCTTCGA CGGCTAGCTC 240  
 10 CTAAAGGTT ACTCCACCGG CTTCCGGTGT TACAACTCT CGTGGTGTGA CGGGCGGTGT 300  
 GTACAGACC CGGGAACGTT ATTACCGTA GCATGTGAT CTACGATTAC TACGATTCC 360  
 AGCTTCATGT AGTCGAGTT GCAGACTACA ATnCGAAGT 400

15 (2) INFORMATION FOR SEQ ID NO: 3821:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 20 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3821:  
 25 TATTAAATTA ATGTGGGCC TAATGGACT CGAACCCG ACCTCACGT TATCAGCGT 60  
 GCGCTCTAAC CAGCTGAGCT ATAGGCCCAT TAATTGAAT GAACAAACAT TCAAACTGA 120  
 30 ATACAATATG TCACGTTATT CCGCATCTTC TGAAGAAGAT GTTCCGAATA TATCCTTAGA 180  
 AAGGAGGTGA TCCAGCGCA CCTTCGATA CGGCTACCT GTTACGACTT CACCCCAATC 240  
 ATTGTCCCA CCTTCGACGG CTAGCTCTTA AAAGGTACT CCACCGSCTT CGGGTGTAC 300  
 35 AAATCTCGT GGTGTGACGG GCGGTGTGTA CAAGACCGG GAACGTATTC ACCGTAGCAT 360  
 GCTGATCTAC GATTACTnAG CnTTCACG TTCCATnTA 400

(2) INFORMATION FOR SEQ ID NO: 3822:

- 40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 45 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3822:  
 50 TCTACCAACT GAGCTAATGG CTCTAATGGC TGGCTAGCT GGATTGGAAC CAACGAGTGA 60  
 CGGATAAAGT CGGTGCCTT ACCGCTTGGC TATAGCCCAA TATATAGAT GnGGAGGGGG 120  
 GCAGATTGCA ACTGCCGAAC CCGAAGAGCG GATTTACAGT CCGCCGCTT TACCACTTCG 180

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GAACGCGGA CCTCTGCTT GTAAGGCAGA TGCTCTCCA GCTGAGCTAA TTCTCCAAAA 300  
 TAATGACTCC TACGGACTCG AACCCGTGTT ACCGCCGTGA AAGGGCGGTG TCTTAACCGC 360  
 5 TTGACCAAGG AGCCATGCTC CACAGTAGGA TTCGAACATA 400

(2) INFORMATION FOR SEQ ID NO: 3823:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 391 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3823:

AACCTGCCTC TTTAGGTACA GCATGAGGCC CTAGGAAAGT ATGTTTCATG TCTAAATCAT 60  
 20 ATTTCTCAGC TAAACGATTA GACACTTTCA ATTGCTTCAG TTCATTTTCT CTATCTAATC 120  
 CATAACCACT CTTACTTTCA ACTGCAnGCA CGCCGTGTTT AATCATAGTA AGCAAATCAT 180  
 GCTCTGCTTT TTTAAACAAG TCATCTTCGG ATGTTTCTCT AGTAGCATTA ACGGTAGATA 240  
 25 ATATGCCACC ACCCATTTCT AATATTTCAA GGTAAAGACTT ACCTGACGT TTTAATGACA 300  
 TCTCATGTTT TCGAGATCCA CCAAATGThA AATGGGGTAT GTGGCATCTA CTAAGCCGGG 360  
 GGACACTAnC TTTCCCACTA GGCACTAATC G 391

(2) INFORMATION FOR SEQ ID NO: 3824:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3824:

ACATATCGAT AACATGACAT AACTCATGCT GGGTTTCCCC ATTGCGAAAT CTCTGGATCA 60  
 AAGCTTACTT ACAGCTCCCC AAAGCATATC GTGTTAGTA ACGTCTTCA TCGGCTTCTA 120  
 45 GTGCAAGGC ATCCACCGTG CGCCCTTAAT AACTTAATCT ATGTTTCCAT CCTACAGGAA 180  
 ACGCGTTATT AATCTTGTGG AGTGTTCCTT CGAACACTGA GCGATTATT CTTATGAATT 240  
 CAAGCTTATT TAAAACTCTT TATTCACGCG GTTTTGCTTG GTAAAACTTA TATTTTACTT 300  
 50 ACnTATCTAG TTTTCAATGT ACAATTCTTT TTAGTCAAGC GCTCGCATAA GCAATATCAC 360  
 TTTGAACCAA AAAAGATTGG AAGGTGAAAT AAACATTCAA 400

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3825:

10

ATCGATAACA TGACATAACT CATGCTGGGT TTCCCCAATC GGAATCTCT GGATCAAAGC	60
TTACTTACAG CTCCCCAAAG CATATCGTCG TTAGTAACGT CCTTCATCGG CTTCTAGTGC	120
CAAGGCATCC ACCGTGCGCC CTTAATAACT TAATCTATGT TTCCATCCTA CAGGAAACGC	180
GTTATTAATC TTGTGAGTGT TCTTTCGAAC ACTAGCGATT ATTTCTTATG AATTCAAGCT	240
TATTTAAAC TCTTTATTCA CTCGGTTTGT CTGGTAAAA TCTATATnTT ACTTACTTAT	300
CTAGTTTTCA ATGTACAATT TCTTTTGTAGT CAAGCGCTCG CATAAGCAAT ATCACTTTAA	360
CCAAAAATA TTTGAATGTn AAATAACAT TCAAACTGA	400

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## (2) INFORMATION FOR SEQ ID NO: 3826:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3826:

35

TCACTCACCG CAGATTTTTA AGTCCTGTGC GTCTGCCAGT TCCGCCACCC CGGCACTATA	60
AAAATGGAGC AGAAGACGGG ATTCGAACCC GCGACCCCA CCTTGGCAAG GTTGTAITCT	120
ACCGCTGAAC TACTTCTGCA TATGCGGGTG AAGGGAGTGG AACCCCAACG CCGTAAGnCT	180
TAGATCCTAA GTCTAGTGGC TCTGCCAATT CCGCCACACC CGCAAATGTT GAGCCATAGA	240
GGATTGGAAC CTCTGACCCT CTGATTAAAA GTCAGATGCT CTACCAACTG AGCTAATGGC	300
TCTTCCATGG TGCGGCCAG AGGATTGAA CCCCCAACCT TATTGGTTAC AAGTCAGTTG	360
CTCTTACCAA TTGAGTAGG nCGGCAATAT GTTAAGATTA	400

45

## (2) INFORMATION FOR SEQ ID NO: 3827:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3827:

AGTGGTGGA AGTGGTCTTAA AGTGGTGGT CTAAGTTAG AGAAGACCAA AAGAAGAAAA 60  
 5 GTGATAAATA CGCTAAGAA CAAGAAGAAA CAGTCGTAG AAACAGAGAA AATATAAGA 120  
 AATGGTTGG AATGCTTGG GACGGCGTAA AAATAAAAC TGGTGAAGCC TTAGTAAAA 180  
 10 TGGGCAGAAA TGCTAATCAT TTTGGCGCG AAATGAAAAA AATGTGGAGT GGAATCAAG 240  
 GAATTCACAG CAAATTAAGT TCAAGTTGGA GCTCAGCCAA AAGTTCTGTA GGATATCACA 300  
 CTAAGGCTAT AGCTAATTAG TACTGATAA ATGGTTTGG AAGCTTGGC CAATCTGTTA 360  
 15 AATTGACTA CAGGAAGTAT TTACATTCAA ACTAGGCAA 400

(2) INFORMATION FOR SEQ ID NO: 3828:

(i) SEQUENCE CHARACTERISTICS:

20 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3828:

TCTCAGTCC AGTGTGGCG ATCACCTCT CAGGTCGGCT ATGCATCGIT GCCTTGGTAA 60  
 30 GCGTTACCT TACCAACTAG CTAATGCAGC GCGATCCAT CTATAAGTGA CAGCAAGACC 120  
 GTCTTCACT TTGAACCAT GCGGTTCAA ATATTATCCG GTATTAGCTA CGGTTTCCCG 180  
 AAGTTATCCC AGTCTTATAG GTAGGTTATC CACGTGTTAC TCACCCGTCC CCGCTAACA 240  
 35 TCAGAGAAGC AAGCTTCTCG TCCGTTGCT CGACTTGCAT GTATTAGGCA CGCCGCCAGC 300  
 GTTCATCTG AGCCAGGATC AAATCTCCA TAAAAATTAT GATGTTGAT AGCTCATAAA 360  
 TACTAAATAA TGTTGTAAC TATAGTACGT TTTTnGAAAT 400

(2) INFORMATION FOR SEQ ID NO: 3829:

(i) SEQUENCE CHARACTERISTICS:

45 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3829:

50 CAAGCGCCAT GACATCATAA CTTTCTTGCA CAAGATATGT GAACGGCGGT GTTGATCCTA 60  
 GATTCGTGGC ATGCATACGC AAACCATTTT CTTCAATTAC TTCACCAAGG CGTTTAAAT 120

ATTGATAAAA CCTTGATGTG TTTCGTGTCA ATGACATACC ATATCGACTA GGTACCTTTT 240  
 TAGAATGTTG ATTAATCACA ACAAATATCA TGGCAAGGTC ATCTTCAAAA TGATTGGATT 300  
 5 CAAGTGGGAr sGGCATATGA CGTCTCATCA ClATACCCCT: ThThCCCCATT CTGCAAAAThC 360  
 ACCCATAAAT ACTACGGGAC GGAGAACCCG TACCCATTTC 400

(2) INFORMATION FOR SEQ ID NO: 3830:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3830:  
 20 GGGTACTAAG ATGTTTCAGT TCTCCGGGTG TGCCTTCTGA TATGCTATGT ATTACATAT 60  
 CGATAACATG ACATAACTCA TGCTGGGTTT CCCCATTCGG AAATCTCTGG ATCAAAGCTT 120  
 ACTTACAGCT CCCCAAAGCA TATChCGTTA GTAACGTCCT TCATCGGCTT CTAGTGCCAA 180  
 25 GGATCCACCG TGCGCCCTTA ATAACTTAAT CTATGTTTCC ACCATTTTTA TAAGTCAAAC 240  
 GCTCACATAC GGCTTCGTTT TCATTATTTT AAATGCTCAT TTACATAAGT AAATCTGCT 300  
 30 TTAAAAATAT TTAACCTATT GTCTGCTAAA CGTTTTCTTT TATAAAAAGA TTTAAACGCG 360  
 TTATTAATCT TGTGAGTGGT CCTTCGAACA CTAGCGAThA 400

(2) INFORMATION FOR SEQ ID NO: 3831:

35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3831:  
 AAATGCGGCT CATCGCATCC ATTTTTTGCC TGGCAACGTT CTACTCTAGC GGAACGTAAG 60  
 45 TTGGCTACCA TCGTCGCTAA AGACCTTTCT TGACTTGTGA CAATCGCTTG CTCTTTCTCT 120  
 CTCCTTCGGC TCTCGCTTAC TCATTTAGCT CTACTAAACT CGTTGCGCTC TTTTCTCGTT 180  
 TCGTCAGATT CAAACGTTTT CACTTCGCCA AGCCATTTTT CTTTGTGTTT ACTTTTTATT 240  
 50 TTGACGTTTT AGACATAAAA AAAAGAGACC TTGCGGCTCT AATGCGGCTC ATCGCATCCA 300  
 TTTTTTGCTT GGGCAACGTT CTACTCTAGC GGAACGTAAT TGGGCTACCA TCGACGCTAA 360

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## (2) INFORMATION FOR SEQ ID NO: 3832:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3832:

```

AGCTTATTTT AAAACGTCGT TTATTCAC TC TGGTTTGGCT TGGTAAATC TATATTTTAC      60
TTACTTATCT AGTTTTCAT GTACAATTTC TTTTGTAGCA AGCGCTCGCA TAAGCAATAT      120
CACTTTAACC AAAAAATATT TGAATGTTAA ATAAACATTC AAAACTGAAT ACAATATGTC      180
ACATTATCC GCATCTTCTG AAGAAGATGT TCCGAATATA TCCTTAGAAA GGAGGTGATC      240
CAGCCGACCC TTCGATACG GCTACCTTGT TACGACTTCA CCCCAATCAT TTGTCCCAACC      300
TTCGACGGCT AGCTCTCTAAA AGGTACTTCC ACCGGCTTCG GGTGTTACAA ACTCTCGTGG      360
TGTGACGGGC GGTGTGTACA AGACCCGGGA ACGTATTTCA      400

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## (2) INFORMATION FOR SEQ ID NO: 3833:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3833:

```

TTTTCTTCTG GTAAATATC TGCAATAACA GTATCTATGC CTACTTGT TT TGCAATGGCT      60
TGAGCAGTGT TTTTATTATC GCCAGTTAAC ATGGCAACTT CAATGCCCAT ATCATGCAAT      120
TGTATTATAG CATCTTTGGC ATGATCTTTG ACAGTATCTG CCACTGChAT GATACCAGTT      180
AATGAATAAT TAACAGCAAT GAGCATAGCA GTTTTACCAT CTCGTTTATA ATGTGTTAAA      240
TCATCAGAAA TATGCTTAGG CAAGCTAATA TCATTGTCAG CCATTAAATnT ACGGGTTACC      300
AACCAATATA TGGTGATGAT CAATCCGTGG CTTCAATACC ATGGCCAGGT ACCGCTTnAA      360
AGTTGTGTGC TCAGTTAATA TTAATTGCTT TCCTTTTGCA      400

```

## (2) INFORMATION FOR SEQ ID NO: 3834:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3834:

5 nAATTATATG GACCTTGCAG GACTCGAACC TGCAGCCGAA CGGTTATGAG CCGTTAGCTC 60  
 TAACCAACTG AGCTAAAGGT CCTAAATATA ATTTTACAAC TAATAAATAG TnGCGGnnGA 120  
 GGGGATCGAA CCCCCGACCT CACGGGTATG AACCGTACGC TCTAGCCAGC TGAGCTACAC 180  
 10 GCCTTATAT AGTTTGTAA TAATATGGTG GAGACTAGCG GGATCGAACC GCTGACCTCC 240  
 TGGTGCAAA GCAGGCGCTC TCCAGCTGA GCTAAGCCCC CATAATAATT ACAGTATATC 300  
 GGAAGACAG GATTGCAACC TCGCACCCT TGGTCCCAA CCAAGTGCTC TACCAAGCTG 360  
 15 AGCTACTTCC CGTATAATTA ACGGCCCCGA TAGGAGTCGA 400

(2) INFORMATION FOR SEQ ID NO: 3835:

(i) SEQUENCE CHARACTERISTICS:

20 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3835:

AATAACAATT GCGCCTACTAA AACTCAAAAT TTCCACCACC AACATCCAAA TTATCAACAT 60  
 30 CGCAACATAA CCAATGTTA TAATAAATCT ATTACACAAA GAGATAAATT ACTTATGCAA 120  
 AGGCGGAGGA ATCACATGTC TATTACTGAA AAACAACGTC AGCAACAAGC TGAATTACAT 180  
 AAAAAATTAT GGTGATTGC GAATGATTTA AGAGGGAACA TGGATGCGAG TGAATCCGT 240  
 35 AATTACATTT TAGGCTTGAT TTTCTATCGC TTCTTATCTG AAAAAAGCCGA ACAAGnATAT 300  
 GCAGATGCTT TGTCAGGTGA AGACATCAGC TATCnAGAAG CGTGGGCAGA TGAAGAATAT 360  
 40 CGTGAAGACT TnAAAAGCAG GAATTAATTG GTTCAAGTCG 400

(2) INFORMATION FOR SEQ ID NO: 3836:

(i) SEQUENCE CHARACTERISTICS:

45 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3836:

50 CTAATCGCAT CTTTTCAT CTAAGTCGT TTGTGACAAA CTACTGAAC TTAGTGCCAT 60

ATTATAGCCG AATGCCAAA ATAGATTTTG ACGAATATTA CGAATGGTTG CTITACTTGC 180  
 5 ATAAATGGCT TTAGGAATAA GCATCAAGTC GCCACCAAGA ATAGTAATAT CAGCTGCTTC 240  
 AATGGCAACT TCTGTACCTG TACCAATGGC GATACCGATA TCAGCTTTAA CTAAATGCAG 300  
 GTGCATCAIT TACACCGTCA CCAACCATCG CAACCTTCTT ACCTGTGTGG TGTAGTTTGC 360  
 10 CAATTGTGGC AGCTTTTThC TTCCGGnGAA AATATCnGGC 400

(2) INFORMATION FOR SEQ ID NO: 3837:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 15 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3837:

AGAGCGGATT TACAGTCCG CGCGTTTACC ACTTCGCTAC CCTCCAGCT TATTCTATATA 60  
 25 ATTTAATAAT CAAAATGGTG GAGAATGACG GGTTCGAACC GCCGACCCTC TGCTTGTAAG 120  
 GCAGATGCTC TCCAGCTGA GCTAATTCTC CAAAATAATG ACTCCTACGG GACTCGAACC 180  
 CGTGTACCG CGTGAAAGG GCGTGCTCTA ACCGCTTGA CCAAGGAGCC ATGGCTCAAC 240  
 30 AGGTAGGACT CGAACCTACG ACCGATCGGT TAACAGCCGA TAGCTCTACC ACTGAGCTAC 300  
 TGTGGGATTA ATATTATGCC TGGCAACGTT CTACTCTAGC GGAAGTAAn TCGGACTACC 360  
 ATCGACGCTA AGGAGCTTAA CTTCTGTGTT CGGACTGGGG 400

35 (2) INFORMATION FOR SEQ ID NO: 3838:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 40 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3838:

AATCGCTTGC TTCTTTCCTC TCCTTCGGCT CTCGCTTACT CATTAGCTC TACTAAACTC 60  
 GTTCGCTCT TTCTCGTTT CGTCAGATT CAAAGTTTTC ACTTCGCCAA GCCATTTTTC 120  
 50 TTGTGTTTA TTTTATTTT GACGTTTTCG ACATAAAAAA AAGAGACCTT GCGGTCTCAA 180  
 ATGCGGCTCA TCGCATCCAT TTTTGCCTG GCAACGTTCT ACTCTAGCGG AAGTAATTGG 240  
 GCTACCATCG ACGCTAAGAA CCTTCTTGA CTTGTGACAA TCGCTGCTT CTTTCTCTTT 300

55

TCAGATCCAA ACGTTTTCAn TCGnCCAAGC CAATTGCGCT

400

## (2) INFORMATION FOR SEQ ID NO: 3839:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 416 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3839:

15	TTACGGCCCG CGTTTACTGG GGCTTCGATT CGTAGCTTCG CAGTAGAcrc GACTCCTCTT	60
	AACCTTCCAG CACCGGGCAG GCGTCACCCT gATAcATCAC CTTACGGTTT AGCAGAGACC	120
	TGTGTTTTTG ATAAACAGTC GCTTGGGCGT ATTCAGTCGC GCTCTTCTGG GCGTTAACCC	180
20	TAAAGAGCAC CCGTCTCCCC GAAGTTACGG GGTCAATTTG CCGAGTTCCT TAACGAGAGT	240
	TCGCTCGCTC ACCTTAGAAT TCTCATCTTG ACTACCTGTG TCGGTTTGGG GTAGGGcACC	300
	TATTTTCTAT CTAGAGGCTT TTCTCGGCAG TGTGAAATCA ACgACTcGAg GACACAATGT	360
25	CTTCTCCCCA TCACAGtTCA GCCTTgAACG rGTaCCGGAT TTGnCTAATG ATTCAG	416

## (2) INFORMATION FOR SEQ ID NO: 3840:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3840:

40	AAGTTAGGCT ACCATCCTCG CTAAGAACTT TTCTTGACTT GTGACAAATCG CTtGCTtCTT	60
	TCCTCTCCTT CCGCTCTCGC TTACTCATTT AGCTCTACTA AACTCGITGC GCTCTTTTCT	120
	CGTTTCGTCA GATTCAAACG TTTTCACTTC GCCAAGCCAT TTTCTTTTGT GTTTACTTTT	180
45	TATTTTGACG TTTTAGACAT AAAAAAAGAG ACCTCACGGT CTCAAACTTG CCTGGCAACG	240
	TTCTACTCTA GCGGAACGTA AGTTGGCTAC CATCGTCGCT AAAGACCTTT CTTGACTTGT	300
	GACAAATCGT TGCTTCTTTC CTCTCCTTCG GCTCTCGCTT ACTCATTTAG CTCTACTAAA	360
50	CTCGTTGGnG CTCTTTTCTT CCGTTTnGTC AGAnTTCAAA	400

## (2) INFORMATION FOR SEQ ID NO: 3841:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3841:

	CGCGACTGAn GAATACAATG nCTACGATAA CTAACCCAA TCAATCTTTT CATTCTATCA	60
10	ATTCTTTTCA AAATCTTCAC TATATATCAT TAATGTCTAC GTATGAATCT AGCTAGAACA	120
	TTCCCTAGCG TTTGAATCAC TTGGACAATA ATGACTAATA CAATAACGCT AATAATAATG	180
	ACCGTCTTAT CAAATCTTIG ATAACCATAC ACTAAAGCTA AGTCTCTAT ACCACCCCG	240
15	CCAACAGCTC CTGCCATGCG CGTACTTCCA ATAAGTCCAA TAATCGCAGT GGTAAATGCT	300
	AATACTAACG AACCTAAAGC TTCAGGAATT AAAAAATATC TAATGATTTG TAGTGGTGAA	360
	GGGCCCATCG CTTTCGCCGC TTCAATAATC CCCTCGTCTA	400

20

(2) INFORMATION FOR SEQ ID NO: 3842:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3842:

	TGCGGATTGC CGTGTTCAGA AATCATCGGC ATCGCGTCAT TCAATGATTC ATATGCATCT	60
	AAAGCAATAG AAGATAATGT GTCTGGCACA TATACCCATG CCAACGTATC AGTAGACGTA	120
35	TGATGTTCTG CTACCGCAAA AACAGTTGTC TCTGGAATAT ACACACCTGA TTGTTTTAAT	180
	CCTTGCTCTG CATTGGGACG ATTACATATC ATCGCTAATA ACTTAGCATT AAAACCGCTT	240
	GATGCGCCAC CACAAGCCCC ACATTCAAGT GATGCATGAT GTGGATTATT GTGAGAATGA	300
40	CTAGCATGAC CTGCTAACAC AACGAACGGC GCAAATGCTT CGGKTAATC CATCAATTTC	360
	AACGCTGTAA CGCGAATCAA TTGCTCTGCT CAGTAAATCC	400

45

(2) INFORMATION FOR SEQ ID NO: 3843:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3843:

5 GCCAACATCC TAGTTGTCCTG GGCAACGCCA CATCCTTTTC CACTTAACAT ATATTTTGGG 120  
 ACCTTAGCTG GTGGTCTGGG CTGTTTCCCh GTCGAACAG GACCTTATCA CCCATGTTCT 180  
 GACTCCCAAG TTAATTAAT TGGACATTG GAGTTTGTCT GAATTCGGTA ACCCGAGAGG 240  
 GGCCCTCGT CCAACAGTG CTCTACCTCC AATAATCATC ACTTGAGGCT AGCCCTAAAG 300  
 10 CTATTTCCGA GAGAACCAGC TATTTCCAGG TTCGATTGGG AATTCTCCGC TAACCTCAGT 360  
 TCATCCGnTC ACTTTCAACG TAAhTCGGGT CGGGTCTCCA 400

(2) INFORMATION FOR SEQ ID NO: 3844:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 469 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3844:

25 ACTTTTACTT GCTGGCCTC CAGCCAAACC TGCTGTTCCA GCACCGATCG CTGCACCTTT 60  
 TTGCCATTA TGATGATCTT TAGACTTATC TTGAGACGCT TTATCCTCAG TCGAGTTAAT 120  
 CGCCTTGCCA GAATTACTTT TGTTTTGAGC GTCATTGAA TGTTTCTTAG CTTTAGAAGC 180  
 30 AGCCATTGCA CCAGCTGCAC CTGCAACACC TGCTGTTCCA GCACCAATAG CTGCTGCTTT 240  
 TTTACCATTA TGATGTTCTT TAGGTCATC TTGATCTTGT TTTACAGAAT CATTATCATG 300  
 TTCATTTTTT GATGTTTCTG ATTGGTTAGC ACCTGTTGTA AAATATGGTT TAGGTGCTG 360  
 35 AGATTGTTCA GCITCACTCT TATCAGAAAC TGTTGAATGC TCAGTGTTAT TTTCTGCATT 420  
 TTTAATAGTA TCGTGTTFan CCATTGTCCT CGAATGGGTT CnGGATGTG 469

(2) INFORMATION FOR SEQ ID NO: 3845:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3845:

50 GCTTCACTAC CAAGTGAAGA AGTTGCTGAA ACTCTGCTAG CACCTGCAnC AGTAACATTA 60  
 GAAGGCGACT TCCAGAAAC AACTGAAAAA ATCCCTGCTA TGCGTAGAGC AATTGCGnAA 120  
 CATGnTTTA ACTCTAAGCA TACTGCACCT CATGTAACAT TAATGGATGA AATTGATGT 180

55

TTAACATTCT TACCTTATGT TGTTAAAGCA CTGTTTCTG CATTGAAAA ATACCCAGCA 300  
 CTTAACACTT CATTCAATGA AGAAGCTGGT GAAATCGTTC ATAAACATTA CTGGGAATAT 360  
 CGGTATTGCA GCAGACACTG ATAGAGGATT ATTAGTACCT 400

(2) INFORMATION FOR SEQ ID NO: 3846:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3846:

TTAAGCTACC ATCTCGCTA AGAACCTTTC TTGACTTGTG ACAATCGCTT GCTCTTTTCC 60  
 TCTCCTTCGG CTCTCGCTTA CTCATTAGC TCTACTAAAC TCGTTGCGCT CTTTTCCTCGT 120  
 TCGTCAGAT TCAACGTTT TCACTTCGCC AAGCCATTTT TCTTTGTGTT TACTTTTAT 180  
 TTGACGTTT TAGACATAAA AAAAGAGACC TCACGGTCTC AACTTGCCTG GCAACGTTCT 240  
 ACTCTAGCGG AACGTAAGTT GGGCTACCAT CGTCGCTAAA GACCTTTCTT GACTTGTGAC 300  
 AATCGCTTGC TTCTTTCCTC TCCTTCGGCT CTGCGTACT CATTAGCTC TACTAAACTC 360  
 GTTGGCGCTC TTTTCTCGGT TCGTCAGATT CAAACGGTTT 400

(2) INFORMATION FOR SEQ ID NO: 3847:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3847:

ATCGTCAACT TATTATTAGA CGATGTACAA GTTACATTAG ACAAAAAAGG TATTACGATG 60  
 GACGTTTCTC AAGATGCGAA AGATTGGTTA ATTGAAGAAG GCTATGATGA AGAATTAGGT 120  
 GCACGTCCAT TAAGACGTAT TGTTGAACAG CAAGTACGTG ACAAAATTAC AGATTACTAT 180  
 TTAGATCATA CAGACGTTAA ACATGTGGAT ATAGATGTTG AGGGATAACG AATTAGTCGT 240  
 AAAAGGTAAG TAACGACACT TTAACATATC GCGCATCAAA AATGAGCATC AGGTCGCCCT 300  
 TGCCTGTGGC TCATTTTITT GAATTAATTC CCTGGGAAAA TGATTGCTGT TGTGCTGTTT 360  
 TGTTCACACA ACAATCAGA TTGAATGTGC ACATGTGACC 400

55

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3848:

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TTTAAAACTC TTTATTCAC TCGTTTTGCT TGGTAAATC TATATTTTAC TTACTTATCT      60
AGTTTTTCAAT GTACAAATAA TGGTGGGCCT AAGTGGACTC GAACCACCGA CCTCACGCTT      120
ATCAGGCGTG CGCTCTAACC AGCTGAGCTA TAGGCCCAT TTTTGAATG TTAATAAATC      180
ATTCAAAACT GAATACAATA TGTCACGTTA TTCCGCATCT TCTGAAGAAG ATGTCCGAA      240
TATATCCTTA GAAAGGAGGT GATCCAGCCG CACCTTTCCG ATACGGCTAC CTGTGThACG      300
ACTTCACCCC AAATCATTTG TCCACCTTC GACGGCTAGC TCCTAAAAGG TTACTCCACC      360
GGCTTCGGGn GTTACAAACT CTCGTGGGTG TGACnGGCGG      400

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(2) INFORMATION FOR SEQ ID NO: 3849:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3849:

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GTCTCAACTT GCCTGGCAAC GTTCTACTCT AGCGGAACGT AAGTTGGCTA CCATCGTCGC      60
TAAAGACCTT TCTTGACTTG TGACAATCGC TTGCTTCTTT CCTCTCCTTC GGCTCTCGCT      120
TACTCATTTA GCTCTACTAA ACTCGTTGCG CTCTTTTCTC GTTTCGTGAG ATTCAAACGT      180
TTTCACTTCG CCAAGCCATT TTTCTTTGTG TTTACTTTTT ATTTTGACGT TTTAGGCATA      240
AAAAAAGAG ACCTTGCGGT CTCAATGGCG CTCATCGCAT CCATTTTTTG CCTGGCAACG      300
TTCTACTCTA GCGGAAGCTA AGTTGGCTAC CATCGTCGCT AAAGACCTTT CTTGACTTGT      360
GACAATCGCT TGCTTCTTTC CThTCCTTCG GCTCTCGCTT      400

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(2) INFORMATION FOR SEQ ID NO: 3850:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 463 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear



## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3850:

GTCTACTAAT GTTACAACCA CACCTGATTa ATTGCTTTTT TAGCAGTAAT TGCCACATCT 60  
 5 GTGTGACGAT AATGATATGC GACAGTTAAT AATTGTGTAT TTTTATTAGC CGCTTCAATC 120  
 ATGCGATCAC ACTCTCCGT CGTCATCGCC ATTGGCTTTT CACACAATAC ATGGACACCA 180  
 10 TGGTTCAATG CTTCATAGA AAGATCAGCA TGGAAATTAT TAGGTGTACA AATGACCACC 240  
 GCATCAACAA GTTTAAACAG CTGCTAGGT GTCTCAACTG CATGAGGTAT ATTTAAAGCGC 300  
 TTCGCAACAT CAATCATCTG CACTGTATTA ATATCTTGTA CTGCAACTAA TGAGACTGTG 360  
 15 TCCTTGAGTT TCAGCAATGC TGGAAATGA CGGTCTTGTC CAATACCACC AACAACTATG 420  
 CACACCAACT TTTAAATTG TnCATGATGT GCnGCTTnA CCG 463

## (2) INFORMATION FOR SEQ ID NO: 3851:

20 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 628 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 25 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3851:

TATGCTCTAA TGCTGGGCTT AGTGGATTGC ACCAACGAGT GACGnAGTCA AAGTcGnTGT 60  
 30 CTTTACGCTT GGCTATAGCC CCAATATATA GATGTTGGAG GGGG CAGATT CGAACTGCCG 120  
 AACCCGAAGG AGCGGATTTA CAGTCGCGcG CGTTTAGCCA CTTCGCTACC CCTCCAGCTT 180  
 35 ATT CATATAA TTTAATAATC AAAATGGTGG AGAATGACGG GTTCGAACCG CCGACCCCTCT 240  
 GCCTGTAAGG CAGATGCTCT CCCAGCTGAG CTAATCTCC AAAATAATGA CTCCTACGGG 300  
 ACTCGAACCC GTGTTACCGC CGTGAAAGGG CGtGTcTTAA CCGCTTGACC AAGGAGCCAT 360  
 40 GGCTCaCAGG TAGGACTCGA ACCTACGACC GATCGGTTAA CAGCGATAG CTCTACCACT 420  
 GAGCTACTGT GgATTAAATAT TATGCTTGGC AACGTTCTAC TCTAGCGGAA CGTAAGTcCG 480  
 GACTrACCAT CGACGCTgAA GGAGCTTAAa CTTCTGTGTT CgGCATGGGA ACAGGTGTGA 540  
 45 CCTCCTTGCT ATAGTCACCA GACATATGGA ATGTGAATTT GATGACATTG CAAAAnTAGn 600  
 TTAGTAAGTA AAAGTGGATT TTGnTTn 628

## (2) INFORMATION FOR SEQ ID NO: 3852:

50 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 55 (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3852:

5 TAAAGATTTA AAAGTAGCTG TTAATTGgNAC AGGTCGAATT GGCCGTGTAG TAGCCGATAT 60  
 ATTTGCCAAT GGTATACAAA GTGATGTGGT CGCATACGAC CGTTTCCTAA TGCTAAAATT 120  
 GCAACGTATG TCGATTACAA AGATACGATT GAGGAAGCGG TTGAAGGTGC TGATATCGTG 180  
 10 ACATTACATG TACCTGCAAC GAAATATAAT CATTATCTAT TTAATGCTGA ATTATTTAAA 240  
 CATTTTAAAA AGGGCGCnTA TTTGTCAATT GTGCGAGAGG TTCTTTAGTA GGATACTAAG 300  
 GCGTTATTAG ACGCATTAGA CAATGGTGTG ATTAAAGGTG CAGCACTTgN TTAAGTATGG 360  
 15 ATTTGGAACG GCAAACTTTT TCCCAAGTGG TCCAAAGGGG 400

(2) INFORMATION FOR SEQ ID NO: 3853:

(1) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3853:

25 TCTTAAACAT TAGCCACAGC TAATTGTGAC TTAAAAATAG GAATACATGA GTAAAACTCA 60  
 30 TCATAAGAAA TACTAATTTC TATAGAAAAA GTATTACTTT ATCGTTGTCC CACCCCAACT 120  
 TGCACATTAT TGTAAGCTGA CTTTCCGCCA GCTTCTGTGT TGGGGCCCCG CCAACTTGCA 180  
 CATTATTGTA AGCTGACTTT TCGTCACTTG CTGTGTGTGG GCCCGCCAA CTGTCACATT 240  
 35 ATTGTAAGCT GACTTTTCGT CACTTnCTGT GTTGGGGCCC CGCCAACTTG CATTGTCTGT 300  
 AGAAATTGGG AATCCAATT CTGCTAIGTT GGGGCCCACA CCCCACCTn GCATTGCCTG 360  
 TAGAATTTCCT TTTGAAAATT CTCTGTGTG GGGGCCCACA 400

(2) INFORMATION FOR SEQ ID NO: 3854:

(1) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3854:

50 GTGCAATCTG CGTTAACAAA TGTAATCGT GTCAATGAGC GATTAACGCA AGCAATTAAAT 60

5 GAAATCAATA nATCAGTAAC TACTGATGGT ATGACACAAT CATCAATCCA AGCATATGAA 180  
 AATGCTAAAC GTGCGGGTCA AACAGAATCA ACAAATGCAC AAAATGTTAT TAACAATGGT 240  
 10 GATGCGACTG ACCAACAAAT TGCGCAGAA AAAACAAAAG TAGAAGAAAA ATATAATAGC 300  
 TTTAAACAAG CAATTGCTGG ATTAnCTCCA GACTTGGCAC CATTACAAAC TGCAAAAnCT 360  
 CAGTTGCAAA TGrTATTGTC AGCCACGAGT ACGGCTGGTA 400

(2) INFORMATION FOR SEQ ID NO: 3855:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3855:  
 TGTGTGAAAA ACCAATGGCT GAAAACGACA GCAGAAGCTC AAAAAATGAT AGATACAGCT 60  
 AAATCAACAG GTAAAAAATT AACAAATAGGT TATCAAAATC GTTCCGAGC AGATAGTCAA 120  
 25 TTTTACATC AAGCAGCGCA ACGTGGCGAC TTAGGAGACA TTTACTTCGG AAAGGCACAT 180  
 GCCATTGTC GTGAGCAGT ACCAACATGG GGTGCTTTTC TAGACGTAGT AAGCTCAAGG 240  
 TGGAGGACCA TTAATCGATA TCGGTACACA CGCTTAGAT TTAACGTTAT GGATAGTGA 300  
 30 TAnTTATGGA ACCAGAATCA GTGATGGGT TCAACATTCC ATAAATThAA TAAACAGCCT 360  
 CATGCGGGCA AACGCTTGGG GTTTCAGGnG TTCCAGATGG 400

(2) INFORMATION FOR SEQ ID NO: 3856:

35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3856:  
 45 CGTTCCTCAAT AGAATGATT AAATCTTCGA TTCTTTTATC TAAATGACTA CCAATTAAAT 60  
 CTATTCTTC TATTGTTAAA TCGCTATCTC CATCTTCTTT TATCTCTGGT ATTATTTTTT 120  
 CTTCAACTAA GTCAGATAT AATGTTTTTG AATTTTCGTT CAATTTCGAT TCGTGATTTT 180  
 50 GAATACTTTT CTCCACACA AATGTATATC TATTGGCATT AGCTTCTACT TTGTACCAT 240  
 CAATAAAAAAT TGAATTATTA TCAATAAGAT TTTGCTTTAA ACATTGACTA TGGAAGTGA 300

55

TATAAGAAGG nGGTTGGAnC nTGAGCGAAC CACAnCATCC

400

(2) INFORMATION FOR SEQ ID NO: 3857:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 381 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3857:

GGCATACCAT	GGTCAACGCG	GTGATGATCA	AGTAACATCA	CATGTTCAAC	ATATTTTTTGA	60
AGTTGTGAAT	GCACATGGTA	AACATTTTGT	TGCATTACCA	CGTGAAGATG	AAGATATTGC	120
AAAAATGCGAG	GCACAAGGTG	TACAAACATT	TATTTTAGGT	GATGATCGCG	GAAAAATATA	180
TCGCCATTTA	AGTGCATCTC	TAGCGACGTC	TAAACAGAAA	GGGGATGAAG	GCTAATGCGT	240
AAAGTTCAAC	CTGTTATGGA	ACAATTAATA	GCACAATCTC	ATCCAGTTTG	TCATTAnATC	300
TATGATTTAG	TCGGACTGGG	ACATCATTTG	CAnCATATTA	CATCGnCTT	GCCGAGTAAT	360
TGTCAAATGT	ACTATGCAAT	G				381

(2) INFORMATION FOR SEQ ID NO: 3858:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3858:

GCATGAAGCC	CCCCTCAAGA	TGAGATTTC	CAACTTCGGT	TATAAGATCC	CTCAAGATG	60
ATGAGGTTAA	TAGGTTCCAG	GTGGAAGCAT	GGTGACATGT	GGAAGCTGAC	GAATACTAAT	120
CGATCGAAGA	CTTAATCAAA	ATAAATGTTT	TGCGACAATT	CACCTTTTACT	TACTATCTAG	180
TTTTGAATGT	ATAAATTACA	TTCATATGTC	TGGTGACTAT	AGCAAGGAGG	TCACACCTGT	240
TCCCATGCCG	AACACAGAAG	TTAAGCTCCT	TAGCGTCGAT	GGTAGTCGAA	CTTACGTTCC	300
GCTAGAGTAG	AACGTTGCCA	GGCAAAAAAT	GGATGCCGAT	GGAGCCGCAT	TGAGACCCGA	360
GGnCTnTTTG	TTTTTTATGT	CTAAAAACGTC	CAAATTAAAnA			400

(2) INFORMATION FOR SEQ ID NO: 3859:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 573 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3859:

	GTTTATTAAT CGTGTCATTA GCATCTTTAT AATTGCTTCT AATCGTATTC AAATCACCTA	60
10	ATGTTAAATC TGTTTAAACA TTATTTTGAA TTTCATTCAT GCATCTGAAT CTGAATCGCT	120
	ATCTGAATCT GAGTCGTTGT CTGAGTCCGA nTCGCTATCT GAhCTGAGT CGCTGTCTGA	180
	ATCTGAATCG CTATCCGAGT CTGAGTCGCT ATCTGAGTCT GAGTCGCTAT CTGAATCTGA	240
15	ATCGCTGTCT GAGTCTGAAT CGCTATCTGA GTCCTGAATCG CTGTCCGAAT CTGAGTCGCT	300
	ATCTGAATCT GAATCGCTAT CTGAATCTGA GTCGTGTCT GAGTCCGAAT CGCTATCTGA	360
	ATCTGAGTCG CTATCTGAGT CTGAGTCGCT ATCTGAATCT GAGTCGCTGT CTGAATCTGA	420
20	ATCACTGTCT GAGTCTGAGT CGCTGTCTGA AGTCTGAATC GCTGTCAGAA TCTGAGTCGC	480
	CAACTGAGTC TGAATCTGAA TCACTGGTCT GAGTCCGAAT CGCnATCTGA ATCnGAATCG	540
25	CnAACCAGT CCGAAGCCGC nAATCCGAAT CTG	573

(2) INFORMATION FOR SEQ ID NO: 3860:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3860:

	GAGCTACACC GCCTTATATA GTTTGTAAAT AATATGGTGG AGACTAGCGG GATCGAACCG	60
40	CTGACCTCCT CGTGCAAAAG CAGGCGCTCT CCCAGCTGAG CTAAGCCCCC ATAATAATTA	120
	CAGTATATCG GGAAGACAGG ATTCGAACCT GCGACCCCTT GGTCCCAAAC CAAGTGCTCT	180
	ACCAAGCTGA GCTACTTCCC GTATAATTAA CGCGCCGAT AGGAGTCGAA CCCATAACCT	240
45	CTTGATCCGT AGTCAAACGC TCTATCCAAT TGAGCTACGG GCGCATATGT TTTTATTGnA	300
	AAATGGTGCC GAGGnACCG GAATCGAAC CGGTACGGTT GATnCACTCA CCGCAGGAT	360
	TTTTAAGTCC TGTGCGTCTG CCAGTTCGCG CACCCCGnGC	400

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(2) INFORMATION FOR SEQ ID NO: 3861:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double

55

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3861:

5	TGTTGCGACT AAACATTAC CTATCGCACA TATGACGAAA CCAATGATAA CTGCAATGAC	60
	ATATTGTGAT GCCAATAATT GAGTCATGCT AATAATAGTG ATGCCGATGA CAGGGAACAA	120
	CGSACCAATG ATGAGCATCA ATTGCCCACC GAAACGTAAT GTTGCTTTT CACCTAAACG	180
10	AATCATCGCA ACTGCCACAA TGGCATATGG CAATGTAACA nGTCCAGATT GCGCACTGAT	240
	AAACCAAGGT GTGTTTGAGC ATATATGAAA AAGACCACTG TTACGCCTAG ACCGCTATTT	300
	AAACAAGT TATTTAAAAA TGCACCAATG GAACGGACGG TTGCGTAATA CTGAGAGnT	360
15	CAATAAAGG TACTTCCATG TCCGACGTTT CGATGGATGG	400

## (2) INFORMATION FOR SEQ ID NO: 3862:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 400 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3862:

25	GTGCGCATGG GAACATATCAA GCTTTGAAGA TGTGGTACTA CATGCGTTGA ATTAGGGATC	60
30	GGTACTTTAT ATGAAGACGT GCTGCTTCCA TTAATGAGT GATGCGATTT TGGCATGAAG	120
	GTCACCTTAA ATGTACATTG TTGTAATAAA ATTGCCTATA AATTTTTCG ACATAAAATA	180
	AGAGGAGCCA ACCATTGTTA GACTATAACA ACGGTGGCT CTTTAATTGT AAAAAGAAAA	240
35	CCATACGCTA TCGGTATGGT TCAGAAAAGG TCTACCATG TCACCAAAAA TGCATCTCTA	300
	CGTGCTAGAA TAAATATTGG TCAGCCAACC AAAATAATCC ACACGGGGAG ATGCTATTTA	360
40	ATGTCCTCTT GACACCAACA GTTAGCACCA TACAAAATGG	400

## (2) INFORMATION FOR SEQ ID NO: 3863:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 400 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3863:

50	TCGGCAAGCC ATTTTCTTTT GTGTTTACTT TTTATTTTGA CGTTTTCAGC ATAAAAAAA	60
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CTAGCGGAAC GTAAGTTGGC TACCATCGAC GCTAAGAACC TTTCTTGACT TGTGACAATC 180  
 5 GCTTGCTTCT TTCTCTTCT TCGGCTCTCG CTACTCTATT TAGCTCTACT AAATCGTTG 240  
 CGCTCTTTTC TCGTTTCGTC AGATTCAAAC GTTTTCACIT CGCCAAGCCA TTTTCTTTG 300  
 TGTGTGCTTT TTATTTTGAC GTTTTAGACA TAAAAAAG AGACCTTGGC GTCTCAATG 360  
 10 CGGCTCATCG CATTCATTT TCGCGCAAC GTTCTACTT 400

(2) INFORMATION FOR SEQ ID NO: 3864:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3864:  
 20 GTACTATAGA ATTAAAGAA TATAAAAATA TAATCCTGAT TAGCTTGTTG TCAAGTCATC 60  
 GTTCATAATG AAGATATCAC GTTCAATTGT ATTGTTGTTT ATGGGAAAT GAATTAATGT 120  
 25 AATAGTATAT GTATGCGGTT ACATAAAAAG CGAACATCTA ACCTGATATT TAAATGAACC 180  
 TGACGCTCAA TCAACTAATT TACAACCGTA TTTTATAAT CAACCATAAA GGAGGAGATA 240  
 30 GAAAATGAAT AGTGCAAAAT TGATTGATCA CACTTTATTG AAGCCTGAGT CAACACGTAC 300  
 GCAATCGAT CCAATCATC GATGAAGCGA AGCATACCAT TTTAAATCTG TATGTGTGAA 360  
 TCCAACGCAT GTTAAAGTG CCAGCAGAGC GACTAGCTGG 400

(2) INFORMATION FOR SEQ ID NO: 3865:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3865:  
 45 GCAGCAGTC TTCATATAA GTACCGATCC CTAATCAAC GCATGTAGTA CCACATCTTC 60  
 AAAGCTTGAT AGTTCCCATG CGCACCCAC GTTTCATACT AGCTATGCGA GCTCAACTG 120  
 50 GTTCATAAAC TCTTTAATAT AAGTCAATGT TTCACCATC GCTGGTGGTC TTGGCAGATG 180  
 TCCCTCTGCC ATTTGATAAA ATGTTTCATG CGTGGCACCT TTTAACTCTA GTTGGTCCGC 240  
 TAAATAATAC GCATGATGAA TACCAACTTG CTGGTCTTTC CCTCCATGTA CAATTAATAT 300

TTTTTTCGGA TGACCAATCA TTCTTCGTAG CATGCCTCTT

400

(2) INFORMATION FOR SEQ ID NO: 3866:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3866:

AAGTCAATAA CTTTTTTTAT CTGTCCATT TTAATTTTITA ACCAAAAATT GATTAAAAAA 60  
 CTGCCTGGCA ACGTTCTACT CTAGCGGAAC GTAAGTTCGA nCTACCATCG ACGCTAAGGA 120  
 GCTTAACCTTC TGTGTCGGC ATGGGAACAG GTGTGACCTC CTGTCTATAG TCACCAGACA 180  
 TATGAATGTA ATTATACAT TCAAACTAG ATAGTAAGTA AAAGTGATT TGCTTCGCAA 240  
 AACATTIATT TTGATTAAGT CTTCGATCGA TTAGTATTCG TCAGCTCCAC ATGTCACCAT 300  
 GCTTCCACCT CGGAACCTAT TAACCTCATC ATCTTTGGAG GGGATCTTAT AACCGAGGTT 360  
 TGGGGnAAAT CTCATCTTGA GGGGGGGCTT CCAGGCTTAG 400

(2) INFORMATION FOR SEQ ID NO: 3867:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3867:

CACCTATAAT CGTTTTAATC GATGGGGGA CGCATAGGGA TAGCGGAnGT GnCATTGGA 60  
 TTGCACGTCT AAGCAGTAAG GCTGAGTATT AGGCAATCC GGTACTCGTT AAGGCTGAGC 120  
 TGTGATGGGG AGAAGACATT GTGTCTTCGA GGTGTTGAT TTCACACTGC CGAGAAAAAGC 180  
 CTCTAGATAG AAAATAGGTG CCGTACCGC AAACCGACAC AGGTAGTCAA GATGAGAATT 240  
 CTAAGGTGAG CGAGCGAACT CTCGTTAAGG AACTCGCAA AATGACCCCG TAACCTTCGGG 300  
 AAGAAGGGTG CTCTTTAAGG TTAACGCCCA GAAGAGCCGC ATGAATAGGC CCAAGCGACT 360  
 GTTTAnTCAA AACACAGTCT CTGCTAAACC TAAGGATGTA 400

(2) INFORMATION FOR SEQ ID NO: 3868:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 383 base pairs



(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3868:

	TTCTTTGGAA ATAGTAACGT TGAAGTTGTA CTCACTGGTG ATACATTGTA TCACTGTTTA	60
10	GCTGAAGCTT TAACCTATAC AAGTGAACAT CAAATGAnCT TTATAGATCC ATTCAATAAT	120
	GTTTCATACAA TTTCTGGACA AGGTACGCTT GCTAAAGAAA TGCTAGAACA AGCAAAGTCT	180
	GACAATGTAA ACCTTGATTA TCTATTGGCC GCAATTGGTG GTGGCGGTTT AATTTCAGGT	240
15	ATTAGTACTT ACCTTAAAC CTATTACCT ACCACGhAAA TTATAGGTGT TGAACCTTCA	300
	GGTGCCAAGT AGTATGTGAT GGAATCTGTT GTGAATATT CAGGTAGTCA CATTGCCCTA	360
	AnTCGATAAA TTTGTGGACG GTG	383

20

(2) INFORMATION FOR SEQ ID NO: 3869:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3869:

	CTAAGCTTAA GGGTTGCGCT CGITGCGGGA CTTAACCCAA CATCTCACGA CACGAGCTGA	60
	CGACAACCAC CACCTGTAC TTTGTCCCC GAAGAAGhGC TCTATCTCTA GATTGTCAAA	120
35	GGATGTCAAG ATTTGGTAAG GTTCTTCGCG TTGCTTCGAA TTAAACCACA TGCTCCACCG	180
	nTTGTGCGGT TCCCGTCAA TTCCTTTGAG TTTCACCTT GCGGTCGTAC TCCCCAGGCG	240
	GAGTGCTTAA TGCCTTAnTG CCAGCACTAA GGGGCGGAAA CCCCCTAACA CTTAGCACTC	300
40	ATCGTTTACG GCGTGGACTA CCAGGGTATC TAATCCTGTT TGATCCCCAC GGTTTCGCAC	360
	ATCAGCGTCA TTTACAGACC AGAAAGTCGn CTTCGGCAAT	400

45

(2) INFORMATION FOR SEQ ID NO: 3870:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 377 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3870:

55

GTGTGCCTTC TGATATGCTA TGTATTACCA TATCGATAAC ATGACATAAC TCATGCTGGG 120  
 TTTCGCCATT CGGAATCTCT TGGATCAAAG CTACTTACA GCTCCCCAAA GCATATCGTC 180  
 5 GTTAGTAACG TCCTTCATCG GCTTCTAGTG CCAAGGCATC CACCGTGC GCCTTAATAAC 240  
 TTAATCTATG TITCCATCCT ACAGGAAACG CGTTATTAAT CTGTGAGTG TTCTTTCGAA 300  
 10 CATGAGCGAT TATTTCCTAT GAATTCAAAGC TTATTTAAAA CTCTTTATTC ACTCGGTTTT 360  
 GCTTGTTAAA AGCnnGn 377

## (2) INFORMATION FOR SEQ ID NO: 3871:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3871:

ATAACGTTGC CCTCCCATG TATATCTAC CCAAACATGA CCATCTTGTA ACATCACTTC 60  
 25 TGTATAATCA CAATACCCAC CAGGTGGAA CTGATAACCC ACTGGACAAG ATAAGAATGG 120  
 CCCCACCTTT CTTACTGTGA TTGGTTGATT GCCGTTGTG AATCTAGCAC TTTCTCCAT 180  
 GTAGTAAGTA CCATATTAT TACGTTCCA TGCACCTGCA ACTGGTTAA CTGTATTACT 240  
 30 TGAAGCGCTT GACTCATTAAG ACACAGTGGC AACCAGTATT TTACCATCCA TGTACGCCCT 300  
 AAATCTGCTT GATAAAGTAG TCTTTAAGT TGCAACCGCT TGTCTTCIGG GCAATAGACC 360  
 35 GCGAGTTACn GGGGTCAAA CCnTGGTGT AAAAnCGAAC 400

## (2) INFORMATION FOR SEQ ID NO: 3872:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3872:

CGCTACACTA CGAGACCATT AGTAAACGC AGGAAGAGGG ATTCGAACCC CCGCGAGCCG 60  
 TTAAGCCCTT GTCGGTTTTC AAGACCGATC CTTTCAGCCG GACTTGGGTA TTCTCCAAA 120  
 50 ATTATATGGA CTTGTCAGGA CTCGAACCTG CGACCGAACG TTATGAGCCG TTAGCTCTAA 180  
 CCAACTGAGC TAAAGGTCCT AAATATAATT TTACAACTAA TAAATAGTGG CGGTGAGGG 240

55

GCCTTATATA GTTTGTAAAT AATATGGTGG AGACTAGCGG GGATCGAACC GCTGTACCTC 360  
 CTGCGTGCAA ACGGGGCGCTC TTCCAGCTG nAGCTAAAGC 400

5 (2) INFORMATION FOR SEQ ID NO: 3873:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 584 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3873:

ACAGCTCACG GTCTCAACTT GCCTGGCAAC GTTCTACTCT AGCGGAACGT AAGTTGGCTA 60  
 CCATCGTCGC TAAAGACCTT TCTTGACTTG TGACAATCGC TTGCTTCTTT CCTCTCTCG 120  
 20 GTCTCGCTTA CTCATTTAGC TCTACTAAAC TCGTTGCGCT CTTTCTCGTT TCGTCAGATT 180  
 CAAnngTTTT CAATCGCAA GCCATTTTTC TTGTGTGTTA CTTTTTATTT TGACGTTTTA 240  
 GGCATAAAAA AAAGAGACCT TCGGCTCTCA AnTGCGGCTC ATCGCATCCA TTTTTCGCT 300  
 25 GGCAACGTTT TACTCTAGCG GAAnTAAGTT GGGCTACCAT CGTCGCTAAA GACCTTTCTT 360  
 GACTTGTGAC AATCGCTTGC TTCTTCTCTC TCCTTCGGCT CTCGCTTACT CATTAGCTC 420  
 TACTAAACTC GTTGCCTCTT TTCTCGTTC CGTCAGATTG AAACGTTTTT ACTTCGCCAA 480  
 30 GCCATTTTTC TTGTGTGTTA CTInThATTT TGACGTTTTA GACATAAAAA AAAGAGACCT 540  
 TCGGGTCCAA ATGCGGGCTC ATCGCATCCA TTTTTCGCT GGGC 584

35 (2) INFORMATION FOR SEQ ID NO: 3874:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3874:

TTTGCTGGC AAGCTTCTAC TCTAGCGGAA CGTAAnTTGG CTACCATCGT CGCTAAAGAC 60  
 CTTTCTTGAC TTGTGACAAAT CGCTTGCTTC TTTCTCTCTC TTGCGCTCTC GCTTACTCAT 120  
 TTAGCTCTAC TAAACTCGTT GCGCTCTTTT CTCGTTTCGT CAGATTCAAA CGTTTTCAC 180  
 50 TCGCCAAGCC ATTTTTCCTT GTGTTTACTT TTTATTTTGA CGTTTGTAGC ATAAAAA 240  
 GAGACCTTGC GGTCTCAATG CGGCTCATCG CATCCATTTT TTGCTGGCA ACGTCTACT 300

55

GCTTGCTTCT TTCTCTTCT TCGGCTCTCG CTACTCATT

400

(2) INFORMATION FOR SEQ ID NO: 3875:

5

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3875:

15

TCTGCTAATT TAAAAATGAT ATTTCTATC TTTCITTTAT TATTAACTG TAATGCACTG

60

GTCGATTCAT CTAATAAAG AATATCCGGT GTATACATCA GTTGCGCGC TATAGCAATT

120

CTTTGCGCT CACCACCGA CATATTTCC ACTTCGAAC TTAATTGATA ATGTCCCAA

180

20

CGACATCTT TAATTAAATG CTTGCACTG TTTCTATCA ATTTATCAAT ACGTCAAGT

240

GATGGGAATA TCAATGTTATC TTCAATCCGT CACCAACAA GTCACTTTG TGCATCAAAT

300

AACTGATTGC TTGACGCCAA TTCTCCGGG GCATAATnCA TATAGGGGT ACCTTAAAAA

360

25

TAAAGGTCCT CCACATGTTG GCCTAnACnA ATTACATAAn

400

(2) INFORMATION FOR SEQ ID NO: 3876:

30

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3876:

AGATAGACTT TCTGGTGAAG ATACACGTGA AGGTATGACA GCAATTATAT CTATCAAAACA

60

40

TGGTGATCCT CAATTCGAAG GTCAAACGAA GACAAAATTA GGTAATTCTG AAGTUCGTCA

120

AGTTGTAGAT AAATTATTCT CAGAGCACTT TGAACGATT TTATATGAAA ATCCACAAGT

180

CGCACGTACA GTGGTTGAAA AAGGTATTAT GCGCGCACTG CACGThTTGC TGCGAAAAAA

240

45

GCGCGTGAAG TAACACGTCC GTAAATCAGC GTTAGATGTA GCAAGCCCTC CAGGTAAATT

300

AGCGGATTGC TCTAGTAAAA GTCTGAAGA ATGTGAGATT TCTTAGTCGA AGGGGCTCTG

360

CCGGGGGGTC TACAAAATCT GGTCTGACT CTAGACCGCA

400

50

(2) INFORMATION FOR SEQ ID NO: 3877:

55

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3877:

	ACCAATTCT CTTTGTATC CGCATCTTT AAATAATTTT ACTGCTCTAG CATGAGCCAC	60
10	CATCATGTTA TGTGATTGGA ATACTTTTTC AAAATCATAT TTAATACCTG GAGGGAATTT	120
	ACCTACTAAA TATTGACCAT CACCAATAGG TCCAATTCA TTGAATGTAG TCCAATATTT	180
	TACTTCTGGG AATTCITTTAA AACAAATATTC AGCATAATCT ACAAAGTAGT CAATCGTTTT	240
15	ACGHTTTAGA AAATCGCCAT CTTTGGTGGT ACACITCTGG GnGTATCAAA ATGnTGCAAT	300
	GTTACAAATG GTTCAACATG ACGGTTTATG GnCACTCTGC AAATAACCTT ATGnTAATAC	360
20	TCAACACCTT AGGGGTTAAC TTGGCCATA TCCCTTTTGG	400

(2) INFORMATION FOR SEQ ID NO: 3878:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3878:

	ATTAAAGCAG TTTCTGGATC TGGTAAAAAT GGTCGTATTA CAAAAGAAGA TGTAGATGCA	60
	TACTTAAATG GTGGTGCAAC AACAGCTTCA AATGAATCAG CTGCTTCACT AACAAAGTGAA	120
35	GAA GTTGTCTG AAACCTCTGC AGCACCTGCh GCAGTTAACA TTGAAGGCG ACTTCCCGAGA	180
	AACAACCTGGA AAAAAATCCCT GGCTATGCGT AGAGCAATTG CGAnAACATG GGTTTAATCT	240
40	TAAGCATACT GCACCTCATG TAACATTAAT GGATGAAATT GGATGTTCAA GCATTATGGG	300
	GATCACCGTA AGAAATTTAA AGAAATCGCG GCTGAACAAG GTACTAAGTT AACATTCTTA	360
	CCTTATGTTG TTAAnGCACT GTTTTCGGCA TGnAAAAAT	400

45

(2) INFORMATION FOR SEQ ID NO: 3879:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3879:

1 TGTGTTTAC TTTTATTTT GACGTTTTAG ACATAAAAAA AAGAGACCTT GCGGTCTCAA 120  
 2 TCGCGCTCAT CGCATCCAIT TTTIGCCTGG CAACGTCTTA CTCTAGCGGA ACGTAAGTTG 180  
 5 GCTACCATCG ACGTAAGAA CCTTCTTGA CTTGTGACAA TCGCTTGCTT CTTTCTCTTT 240  
 6 CTTGCGCTCT CGCTTACTCA TTTAGCTCTA CTAAACTCGT TCGGCTCTTT TCTCGTTTCG 300  
 7 TCAGATTCAA ACGTTTCACT TCGCAAGCCA TTTTCTTTG TGTGCTTTT ATTTGACGTT 360  
 10 TAGACATAAA AnAAGAnCCT TCGGnCTCA ATGCGGCCAT 400

(2) INFORMATION FOR SEQ ID NO: 3880:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 3880:

21 TAGGTGTAAA TCCTGCGATT CGATCTGGAC CATATTTTTT TATTGTATAC AGTAATTGTG 60  
 25 CTGCGATTAT CTCTGTAACG TCITTCCAAT TTGAACGCAC GTGCCCTCCC ATACCTCGGG 120  
 30 CTTGCTTATA TTGTTTGGCT TTGTCTTCAT TTCAACAAT AGACGCCCAT GCAGCAACGC 180  
 31 GATTACCATT GTTTTCTTCT AATGCTTCAG TCCATAAATC CCAGAGTTTT CCACGAATAT 240  
 32 ATGGATATTG ATTCGAAGCG GACTGTATCA TACCAAGAGA ATGACGCACT CGTGGACATC 300  
 33 CTCTCGGTCA TATTCAGGCA TATCCGGACA CAACTTGGAT AGCAGTTGTG ATTTCCCGAG 360  
 35 AATCACACCA TTTCACAAAC TTCCAGACAT GGCTGACAGT 400

(2) INFORMATION FOR SEQ ID NO: 3881:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3881:

46 TGAGTAGCGA AAGACGGGTG AGAATCCCGT CCACCGATTG ACTAAGGTTT CCAGAGGAAG 60  
 50 GCTCGTCCGC TCTGGGTTAG TCGGGTCTTA AGCTGAGGCC GACAGnGTAG GCGATTGGATA 120  
 51 ACAGGTTGAT ATTCTGTAC CACCTATAAT CGTTTAAATC GATGGGGGGA CGCAGTAGGA 180  
 52 TAGGCGAAGC TGCgATTGGA TTGCACGTCT AAGCAGTAAG GCTGAGTATT AGGCAATTC 240

55

TCACACTGCC GAGAAAAGCC TCTAAGATAA GAAAATTAGG TGCCCGTACC GCAAACCGAC 360  
ACAGGTAGTC CAAGATGGAG AntCTnAAGG TGGAGCGAGC 400

(2) INFORMATION FOR SEQ ID NO: 3882:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 609 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3882:

CATCCCCAAC TTGCACATTA TTGTAAGCTG ACTTTTCGTC ACTTCTGTGT TGGGGCCCTC 60  
ACCCCAACTC GCATTGCCTG TAGAATTCT TTTGAAATT CTCTGTGTG GGGCCCTGA 120  
CTAGAATTGA AAAAAGCTTG TTACAAGCGC ATTTTCGTTT AGTCAACTAC TGCCAATATA 180  
ACTTCGTAGA GCATAGAATA TTGATTATG TCCAGCCTG AGTTAATTTT CTATAAAAGT 240  
ATATTTAATT TGCCTTTATA CCGICAACT TCACTTTAGC TTTGTCAAAC CCCTTTCTAT 300  
TAAGTTTTCA GAAATAAAC TATCTTAAAA TATAAAAAAA TCGAGAATTC GTAGTTTAAT 360  
AACGAAATTC TCGTTCTTAT CCTTTTGaAT aTACTCAATT TTCCACAAAA ACAACAAGT 420  
AGTATATCTG TTCTAGCTAC TAGAATGACA TACTACTTGT TATTTAAATA CTTAACATAA 480  
CTTTATTAGT TATCTTnTT CTCTATATTT CTACGTGGAC TGACGCTTTT CAnGAATGTC 540  
AGATTCTAA TCTTCTGGT TGGACTCCTG GATATAITCT TGGTAAGCGG ATGGTTTATT 600  
CGGAGTCAA 609

(2) INFORMATION FOR SEQ ID NO: 3883:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 394 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3883:

ATATATTGGC GGACATAACG ATGTACTAGC AGGTGTGCTA ACCGTCAAAG ATGAATCACT 60  
CGCGCAACAG TTGTTTGATT TTCACAACAT GACTGGCGCA ACACTTTCAC CAATAGATAG 120  
TTATTGTGTG TTACGTGGAC TTAAAACCTT GCATTTACGC ATTGAGCGTG CGCAATCAAA 180  
CGCTAGAAAA CTGTCTAAAA AATGTCAGTC ACTTCAAGCA ATTGACGAAT ACTaTATAGC 240

GAAATTTAG ACATTTCAT TTTTCAGAA AGTTAGGAG GTACKGAAAC ATTAGTGACC 360  
 TTCCCTTACA CCCAAACACT GTTGATATGC CAGT 394  
 5 (2) INFORMATION FOR SEQ ID NO: 3884:  
 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 10 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3884:  
 15 CGATTATGA ATTAACAGAA TACGGACCAG AAACGATAAC ACCAGGTCAT CGAGACGAAT 60  
 TTGATCCGAA GTTACCAACA GGAGAGAAAG AGGAAGTTCC AGGTAAACCA GGAATTAAGA 120  
 20 ATCCAGAAAC AGGAGACGTG TTAGACCACC GGTGATTAG CGTAACAAAA TATGGACCTG 180  
 TAAAGGAGA CTCGATTGTA GAAAAAGAAG AAATTCATT CAAGAAAGAA CGTAAATTTA 240  
 ATCCTGATT AGCACCAGG ACAGAAAAAG TAACAAGAGA AGGACAAAA GGTGAGAAGA 300  
 25 CAATAACGAC GCCAACACTA AAAATCCAT TAACTGGAGA ATTATTAGTA AAGGTGATCG 360  
 AAAGAGGAAT CACAAAAGTT CcNTTTATGA TTAACAGATA 400  
 (2) INFORMATION FOR SEQ ID NO: 3885:  
 30 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 35 (D) TOPOLOGY: linear  
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3885:  
 40 TGAGCGGATT ATTTCTTATG AATCAAGCT TATTTAAAC TCITTATTCA CTCGGTTTTG 60  
 CTGGTAAAA TCTATATTT ACTTACTTAT CTAGTTTCA ATGTACAAAT AATGGTGGC 120  
 CTAAGTGGAC TCGAACCACC GACCTCACGC TTATCAGGCG TCGCCTCTAA CCAGCTGAGC 180  
 45 TATAGGCCCA TTTTTTGAA TGTAAATAA ACATTCAAAA CTGGAATACA ATATGTCAG 240  
 TTATTCCGCA TCTTCTGAAG AAGATGTCC GAATATATCC TTAGAAAGGA GGTGATCCAG 300  
 CGCACCTTC CGATACGGCT ACCTTGTTAC GACTTCACCC CAATCATTTG TCCACCTTC 360  
 50 GACGGCTAGC TCCCAAAAGG GTACTnCCAn CGGnTTCGG 400  
 (2) INFORMATION FOR SEQ ID NO: 3886:  
 55



(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3886:

10 TACGGTAGGT GGCAAGCAGT TATCCnGGAA TTATTGGGCG TAAAGCGCGC GTAGGGGTTT 60  
 TTTTAAGTCT GATGTGAAAG CCCACGGCTC AACCGTGGAG GGTCAATTGA AACTGGAATn 120  
 CTTGAGTGCA GAAGAGGAAA GTGGAATTCC ATGTGTAGCG GTGAAATGCG CAGAGATATG 180  
 15 GAGGAACACC AGTGGCGAAG GCGACTTTCT GGTCTGTAAC TGACGCTGAT GTGCGAAACG 240  
 TGGGATCAA ACAGGATTAG ATACCTGGT AGTCCAGCC GTAAACGATG AGTGCTAAGT 300  
 20 GTTAGGGGGT TTCCGCCCTT TTAGTGCTGC AGCTAACGCA TTAAAGCACT CCGCTGGGG 360  
 GAGTTACGAC CGCAAGTTT GGAAACTCAA AGGGAATTGG 400

## (2) INFORMATION FOR SEQ ID NO: 3887:

(1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3887:

35 ATTTTTTAAT TTTTCATGCA ATTTTAAAGC ACCATATAAT GCCTACCAA TTTCAATAAT 60  
 CTTTGTGTC GTTTAAATAA TGTGAATGTC AATAAATTCT CCAAACTAGT CGAAAAATAA 120  
 GGGAGnGGA CATAAAATCCC TAAAAAACA GCAGTAAGAT AATTTTCAAT TAGAAAAATAT 180  
 40 CTTACTGCTG TTCTCTATTT ATACAATACT TCGTATTGAA TGGCTTCGCT TTCCnAGGGT 240  
 GCCGTCTCAG CCTCGGTCTT CGACTGGCAC TGCTCCCTCA GGAGTCTCGC CATTAACTACT 300  
 ACGTATTAAAC ATGGAATTTT ACTTTTACAT ACTTTAAAAA ATAAGnCACT TTGGCCAAC 360  
 45 TACACTACCA TAGGAACCTT GGTAGGAATC CCCCAAATGn 400

## (2) INFORMATION FOR SEQ ID NO: 3888:

(1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

ATACGACAAT CACAGCAATA ATAATTGCTT TAGAAAGTCG TGCCGAACTG GAACTTACAA 60  
 GTCTAGTTCG AACACACACT GATGTGAGTG GTTTTATTTA TTTTAAACAT GAACAATCAG 120  
 5 ATAAGTTACT AGCATTAGCA AATATTATTA AATCAAAGGG CTTCGATTCA TAAAAATTTAA 180  
 ACAATGATTA AAATTAGACG TGTAAATGTT AAATTCTAAA ACGGAAATAA CCACCATCCC 240  
 10 ATTAACCCAC TTtNAtNtT CAATCACTAT ATTTACACA GCTTCATTAA TAAACGACT 300  
 TGCTTCAACC CGCTTCAACT TCAACTGGCT TCAACTTCAG CCTACTTCAT TCAATnACAA 360  
 AACGAATCCG CTTTCATCAA AATCAhCCAT TCTAACGCAC 400

15 (2) INFORMATION FOR SEQ ID NO: 3889:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 485 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 20 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3889:  
 25 CCATGChAGA CGCATACATT GTaGCTTATG GgCGTTCAGC gCAGCGAAmG aAAGCAAGGC 60  
 GCATTATTCC ACGAAAGACC TGATGATGTC GCAGCCAAAG TATTACAAGG CGTATTGAAA 120  
 30 CGTATTGACG GAAAATTCAA TAAGAATATG ATTGAAGATG TCATTGTTGG TACGGCTTTT 180  
 CCAGAAGGAT TACAAGGCCA AAACATTGCA CGAACGATTG CATTGCGTGC GGGATTATCT 240  
 GACACGGTAC CGGGTCAAAC AGTGAATCGC TACTGCTCAT CAGGATTACA AACCATCGCG 300  
 35 ATTGCAGCCA ATCAAATTAT GSCTGGTCAA GGAGATATAC TTGTAgCTGG TGGCGTTGAA 360  
 TTGATGAGTG CCGTACCAAT GGGTGGCAAC GAGCCACAA ACAATCCaAc CTTwACAATA 420  
 tGaTGATATA GGTGCGTCCA TATnCTATG GGTtTnAAnt GCTGGAAAAT GTTAGCCTnC 480  
 40 CCAAT 485

(2) INFORMATION FOR SEQ ID NO: 3890:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 389 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 45 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3890:  
 55 AGGCAGATGC TCTCCAGCT GAGCTAATTC TCCAAAATAA TGACTCCTAC GGGACTCGAA 60

AGSTAGGACT CGAACCTACG ACCGATCGGT TAACAGCCGA TAGCTCTACC ACTGAGCTAC 180  
 TGTGGGATTA ATATTATGCC TGGCAACGTT CTACTCTAGC GGAAntGAAT TCGGACTACC 240  
 5 ATCGACGCTA AGGAGCTTAA CTTCGTGTGT CGGCATGGGA ACAGGTGTGA CCTCCTTGCT 300  
 ATAGTCACCA GACATATGAA TGTAATTTAT ACATTCAAAA CTAGATAGTG AAGTAAAAAT 360  
 10 GGTITTTGcNt CGCAAAACAT TTATTTTGn 389

(2) INFORMATION FOR SEQ ID NO: 3891:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3891:

CAGATGTTTA AGTCTGTGTC GTCTGCCAGT TCCGCCACCC CGGCACATA AAAATGGAGC 60  
 AGAAGACGGG ATTCGAACCC GCGACCCCAA CCTTGGCAAG GTTGTATTCT ACCGCTGAAC 120  
 25 TACTTCTGCA TATCGGGGTG AAGGGAGTCG AACCCCCACG CCGTAAGCTn AGATCCTAAG 180  
 TCTAGTGCCT CTGCCAATTC CGCCACACCC GCAAAATGGTG AGCCATAGAG GATTCGAACC 240  
 TCTGACCCTC TGATTAAAAG TCAGATGCTC TACCAACTGG AGCTAATGGC TCTTCCATGG 300  
 30 TGCCGGCCAG AGGACTTGAA CCCCCAACCT ACTGGATTTA CAAGTCAGTT TGCTCTACCA 360  
 ATTGGAGCTA GGGCCGGGCA ATATGCTAAG AATAAATTGG 400

(2) INFORMATION FOR SEQ ID NO: 3892:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3892:

CTCTCGGTGG TCGTGCTACA ACTGGTAAAA ATGTACATGT AGGGGCTGGC GCAGTATTAG 60  
 CAGGTGTGAT TGAACCCCTT AGTGCTTCAC CGGTTAATAT CGAGGATGAT GTATTAAATCG 120  
 50 GTGCCAAATGC AGTTATTTTA GAAGTGCTAC GTTTGGTAA AGGTGCTATT GTTGCACTG 180  
 GCGCGATTGT GACACAAGAT GTACCAGCTG GTGCAGTTGT TGCTGGTACA CCTGCAAAAG 240  
 TGATTAAAGCA AGCTTCTGAA GTACAAGATA CTAATAAAGA GATTGTAGCA GCATTAAAGA 300

CCACCnTAAT GGTnTAGCAT TGAATAAACT TATGnnCCCC

400

(2) INFORMATION FOR SEQ ID NO: 3893:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3893:

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GAATGTAGTT GTGATAAATA CAAACGTGTT CGCTACAAAG GCATGGTCTG TGACAGATGT 60

GGAGTTGAAG TAACTAAATC TAAAGTACGT CGTGAAAGAA TGGGTCACAT TGAACCTGCT 120

GCTCCAGTTT CTCACATTG GTATTTCAAA GGTATACCAA GTCGTATGGG TATTATTACT 180

20

TGACATGTCA CCAAGAGCAT TAGAAGAAGT TATTTACTTT GCTTCTTATG TGTGTAGAT 240

CCAGGTCCAA CTGGTTTAGA AAAGAAAAC TTTATTATCTG AAGCTGAATT CAGAGATTAT 300

TATGATGAAA TACCAGGTC AATTGCTTGC CAAAATGGG TGCCAGAAGG TCATTAAAAG 360

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ATTTACTTGA AGnnGATTGA TnCTTGACGA GGAACCTnA 400

(2) INFORMATION FOR SEQ ID NO: 3894:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 485 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3894:

40

CACGTGAAGT TAGAGATACT TCATTACGTG TACCTCACGG CGCTGGCGGT ATCGTTCTTG 60

ATGTAAAGT ATTCATCGT GAAGAAGCG ACGATACATT ATCACCCTGGT GTAAACCAAT 120

TAGTACGTGT ATATATCGTT CAAAACGTA AAATTCATGT TGGTGATAAG ATGTGTGGTC 180

GACATGGTAA CAAAGGTGTC ATTTCTAAGA TTGTTCTGTA AGAAGATATG CCTTACTTAC 240

45

CAGATGGACG TCCGATCGAT ATCATGTTAA ATCCTCTTGG TGTACCATCT CGTATGAACA 300

TCGACAAAGT ATTAGAGCTA CACTTAGGTA TGGCTGCTaA AAATCTTGGT ATTCACGTTG 360

cATCACCAGT ATTTGacCGT GcAaACGtTG aCGATGTATG GTCAnCAATT GAAGAAGCTG 420

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GTATGGCTCG TGATGGTAAA ACTGTACTTT ATCGATGGAC GTACCAGGTG ACCCnTCCGA 480

TAACC 485

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 507 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3895:

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GAACAACATA CCTTTGTTG TTGATTCTTC TCCACCTGTT TCAAGTAGTT CAGATTTCTT	60
AGATTGTGGT TTTTATGTTG GTGCCACTGC TTTAACCTTT TCATTGATTT CAATAACAGG	120
TGTTACTACT TTACCTTGTT CCACTGGTTT AGAAGGCTTT TTAGGTTCTT CTTTGGCAGG	180
TGGTACTGGT TTACCAAGTT CAGCTGGTAC CTCTGGTGTG GCGGGTGTG GAGTTTCTGG	240
CTCACTCGGC ACTTCTGGTG TCGGTGGTGT TGGTGTTCCT GGCTCACTTG GTACTTCTGG	300
TGTTGGTGGC GTTGGTGTG CCGGCTCACT TGGTACTTCT GGTGTCCGGT GCGTGGGTTG	360
CACGATTGGA gGTGTGTAT CTCTTCAAT CGTTTGTGA CCTTCATTTT GGGCCGCTTA	420
CTTTTGGGAA GGTATCTTC TTCAAAGTCA AACTAATGT GGTCCACCGG AATTGATAAC	480
TGGGGTTAAC CTTAAATTGG AACCTCC	507

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## (2) INFORMATION FOR SEQ ID NO: 3896:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3896:

40

CTAGCGGAAG TAATTGGCTA CCATCGTCGC TAAAGACCTT nGGnGACTTG TGACAATCGC	60
TTGCTTCTTT CTTCTCCTTC GGCTCTCGCT TACTCATTTA GCTCTACTAA ACTCGTTGCG	120
CTCTTTTCTC GTTTCGTCAG ATTCAAACGT TTTCACCTCG CCAAGCCATT TTTCTTTGTG	180
TTTACTTTTT ATTTGACGT TTTAGGCATA AAAAAAGAG ACCTTGCGGT CTCAATGCGG	240
CTCATCGCAT CCATTTTTTG CCTGGCAACG TTCTACTCTA GCGGAAnGTA ATTGGGCTAC	300
CATCGTCGCT AAAGACCTTT CTTGACTTGT GACAATCGCT TGCTTCTTTC CTCTCCTTCG	360
GCTCTCGCTT ACTCATTTAG CTCTACTAAA CTCGTTGCGC	400

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## (2) INFORMATION FOR SEQ ID NO: 3897:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

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(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3897:

	TTGAAGAAGA TCGCGATGAC TATACAATCA ATATCGAGTA TAATACCGAT TTATATCACT	60
10	CAGAAACAGT TCGTCACATG GGTAATCAAT GTATGATTAT GATTGATTAT ATTTTGAAGC	120
	ATCAAGATAC ACTACAAATT TGTGATATAC CAAACGGCAC GAGGAACCTC TAAATTGGGT	180
	CAATACGCAT GTTAAAGATC GAATGCTTAA TGTCCTGGGA AATAAATCTA TCATAAGTTA	240
15	CTTTAATGAA GTTGCTCAC GACAAGGTAA TCATGTTGCG CTAGTCATGA ATGAnTTGAC	300
	AATGACGTAT GAAACATTAC GCAACTATGT GGGATGCCAT TCGGCACATG CTCTCATCAA	360
20	ATGTTGTGGG CAATGGTCAA CGGGTTGCCT TGGTGTACAG	400

(2) INFORMATION FOR SEQ ID NO: 3898:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3898:

	GAAATCAGTA TTAAAGCAGT TAATCCACAA GGGAAAGTGG TTAATACAGT TGGCTCTGGT	60
	GATAGTACAG TTGCAGGCAT GGTGGCTGGA ATTGCTTCAG GTTTAACGAT TGAAAAAGCA	120
35	TTCCAACAAG CAGTCGCATG CGGTACTGCC ACGGCATTG ATGAGGACTT AGCAACACGG	180
	GACGCTATAG AAAAAATAAA ATCACAAGTT ACGATTAGCG TACTTGATGG GGAGTGAAAA	240
	TAATGAGAGT AACAGAGTTA TTAACAAAAG ATACAATAGC AATGGATTTA ATGGCAAAATG	300
40	ACAAAAATGG TGTTATTGAT GAGTTAGTAA ATCAATTAGA CCAAGCAGGT AAATTAAGTG	360
	ATGTCGCGTC ATTTAAnGGA AGCGATTAC CATCGnGATC	400

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(2) INFORMATION FOR SEQ ID NO: 3899:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3899:

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CTAGCGGAAC GTAAGTTAGC TACCATCCTC GCTAAGAACC TTTCTTGACT TGTGACAATC 120  
 GCTTGCTCTT TCTCTCTCCT TCGGCTCTCG CTTACTCATT TAGCTCTACT AAACCTGGTTG 180  
 5 CGCTCTTTTC TCGTTTCGTC AGATTCAAAC GTTTCACATT CGCCAAGCCA TTTTCTTTTG 240  
 TGTTTACTTT TTAATTTGAC GTTTTAGACA TAAAAAAGA nACCTCACGS TCTCAACTTG 300  
 10 CCTGGCAACG TTCTACTTCT AGCGGAACGT AAGTTGGCTA CCATCGTCGC ThAAAGACCT 360  
 TTCTTGGACT TGTGGACAAT CGGCTTGGCA nTCTTnCTC 400

## (2) INFORMATION FOR SEQ ID NO: 3900:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3900:

TGCACGGTA TCTGATGGTT GCTCAGTTGC ATCTACCCAA GGTAACCAAT CCCTAAGTGA 60  
 25 ATTTCTTGAA CGATTGACTA AATTGAAAG CGCTTCTGTG TCATGAGCIT CTAAAATTTT 120  
 TAATGTTATT TGTTCATTCA CTTTCATTCC AAACATACCA TCACATCCTC ATTCAATTTT 180  
 30 CATATAATTC TGTAATTTAT CATTATAATA ACATATTAAT GTTACGCATT GTATCTTAAA 240  
 TTTGTTGTCC TTCCCCAACT TGCATTGCTT GTAGAAATTC TTTTCGAAAT TCTCTATGTT 300  
 GGGGCCCGCh AACTTGCATT GTCTGTAGAA ATTACGAGCC CAATTTCTCT AGGTGGGGCC 360  
 35 CATCCCCAAC TTGCACATTA ATnGCAAGCh GACTTTCCGT 400

## (2) INFORMATION FOR SEQ ID NO: 3901:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3901:

TACTGCTGTT CACTTTTTAT AATACTTCTG AATGCTTCA CTTATACTTC TAGTCACAGA 60  
 TTTAAATAAT CAAAAGTGCA CATTATTAAA ATATCAATTT CACACTCAAT CGGCTCATC 120  
 50 GCATTCATTT CTGTCTCAA CGTTCTACTC TAGCGGAAGT AAGTTAGCTA CCATCCTCGC 180  
 TAAGAACCTT TCTTGACTTG TGACAATGCG TTGCTTCTTT CCTCTCCTTC GGCTCTCGCT 240

TTTCACITCG CCAAGCCATT TTTCCTTGGT GGGTTACCTT TTAATTTGA CGGTTTAGAC 360  
 ATNAAAAAAG GGGACCTCAC GGGCCCAACT TGGCTGGGC 400

(2) INFORMATION FOR SEQ ID NO: 3902:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3902:

TTATTTTGAC GTTTTAGACA TAAAAAAGA GACCTCACGG TCTCAACTG CTTGCCAACG 60  
 TTCTACTCTA GCGGAACGTA AGTTGGCTAC CATCGTCGT AAAGACCTTT CTTGACTTGT 120  
 GACAATCGCT TGCTTCTTC CTCTCCTCG GCTCTGCTT ACTCATTTAG CTCTACTAAA 180  
 CTCGTTGCGC TCTTTCTCG TTTCGTCAGA TTCAAAGTT TTTCACTTCG CAAGCCATTT 240  
 TTCTTTGTGT TTACTTTTTA TTTTGACGTT TTAGGCATAA AAAAAAGAGA CCTTGCGGTC 300  
 TCAATGCGGC TCATCGCATC CATTTTTTCG CTGGGCAACG TTCTACTCTA GCGGGAACGT 360  
 AAGTTGGGCT ACCAACGGCG GCTAAAGACC TTCTCTGAC 400

(2) INFORMATION FOR SEQ ID NO: 3903:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3903:

TTGTTATAAC GAAACCATTT AATAGATTTT TATTGGTGA TTCAAATCA TGAGACTGGG 60  
 ACAGAAATGA TGTTTCATA AAAATTATTT CGTTGTTCCA CTCTCATGAT TTTTITGATG 120  
 AAACATAATT ACATGATTGA TTGCATCATT TTGTTAAACA AGTGATTGCA AACCTGCCAT 180  
 TTCACACTGA AAATTTACAT AATAAGTGAC GATATTTTAC AAGTCATATA CAAATAACAT 240  
 ATATTGTTAA ATAATTTTAC CTAATCTTAA CATTAAATTT ACAATTATAA GCGATAATCT 300  
 AAATATAAAG CTATTTGAG GTGAAATAAT GGAATGTGCG GTTACAGAAG TCATTTTCTC 360  
 CTTTTAGGT GGGTTTAGGG AATTTCCnTT ACGGCCTTAA 400

(2) INFORMATION FOR SEQ ID NO: 3904:



(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3904:

10	CATAAGACAT AATCGCTAGT GTTCGAAAGA GCACTCACA GATTAATAAC GCGTTTCCTG	60
	TAGGATGGAA ACATAGATTA AGTTATTAA GCGCGACGGT GGATGCCCTG GCACTAGAAG	120
	CCGATGAAGG ACGTTACTAA CGACGATATG CTTTGGGGAG CTGTAAGTAA GCTTTGATCC	180
15	AGAGATTTCC GAATGGGGAA ACCCAGCATG AGTTATGTCA TGTATCGAT ATGTGAATAC	240
	ATAGCATATC AGAAGGCACA CCGGAGAN C TGAAACATCT TAGTACCCGG AGGAAGAGAA	300
	AGAAAATTCG ATTCCCTTAG TAGCGCGCAG CGAAACGGGA AGAGCCCCAA CCANCAAGCT	360
20	TGCTTGTTGG GGTGTAGGG CACTCTATAC GGAGTTACAA	400

(2) INFORMATION FOR SEQ ID NO: 3905:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 399 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3905:

	AACTAACATT ACAACATGCA TGIGAACAAT TAAAAACATA TTTTAAGTAG GTGAATGAAA	60
35	TGgTAAATGA ACAAAATCATT GATATTTCAG GTCCGTTAAA GGGCGAAATA GAAGTGCCGG	120
	GCGATAAGTC AATGACACAC CGTGCAATCA TGTTGGCGTC GCTAGCTGAA GGTGTATCTA	180
	CTATATATAA GCCACTACTT GCGGAAttCG TCGTACgATG GAcATTTTCC gACTGTTAGG	240
40	TGTAGAAATC AAAGAAGATG ATGAAAAATT AGTTGTGACT TCCCCAGGAT ATCAATCTTT	300
	TAACACGCCA CATCAAGTnT TGInTACAGG TAATTCGGG TACGACAACA CGATTGATAG	360
	TTTGgTTAAT GGGTTAAGTA TTGAAAGTGT TTTGTCGGG	399

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(2) INFORMATION FOR SEQ ID NO: 3906:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 377 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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TTCTTTAAAA ATAAACGCCT ATnCGTATC GGTGGTGGTG ATTCAGCAGT AGAAGAGGGA 60  
 ACATTCTAAA CTAAATTTCG TGACAAAGTA ACAATCGTTC ACCGTCGTGA TGAGTTACGT 120  
 GCACAGCGTA TTTTACAAGA TAGAGCATTC AAAAATGATA AAATCGACTT TATTGGAGT 180  
 CATACTTTGA AATCAATTAA TGA AAAAGAC GGCAAGTGG GTTCTGTGAC ATTAACGTCT 240  
 ACAAAGATG GTTCACAAGA AACACACGAG GCTGATGGTG TATTCACTA TATTGGTATG 300  
 AACCATTAAc AGCGCCATTT AAnGCTTAGG TATTACnAT GATGTTGGTT ATATTGTGAC 360  
 AAAGGTGGAT TGGCCAC 377

15 (2) INFORMATION FOR SEQ ID NO: 3907:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 502 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3907:  
 AATTAGGTAA TTCAAAAATA TATTAGCGCG GGATGGAGCA GTTCGGTAGC TCGTCGGGCT 60  
 CATAACCCGA AGTCGGtGGT TCAAAATCCGC CTCCCGCAAT ACATAGTTTT TAATTTAATA 120  
 GGTCTCGTAG TGTAGCGrTT AACACGCCTG CCTGTCACGC AGAGATCGCG GGTTCGATTG 180  
 CGTCGAGAG CGCCATTATT ATTACCATTA CGTTTCAGTA GCTCAGTTGG TAGAGCAATG 240  
 GATTGAAGCT CCATGTGTGC GCAGTTCGAC TCTGTCTGa ACCATTCTTA ATTCATGGCG 300  
 GTTGTGGTGA AGTGGTTAAc ACATCGGATT GTGTTCCGA CATTCGAGGG TTCATCCCC 360  
 TTCAGCCGCC CCATAATCGT TTACATTAGC GGGTGTAGTT TAATGGCAAA ACCTCAGCCT 420  
 TCCAAGCTGA TGTGTGGGk TtCGrTTCCC AtCAnCnGy TCcATaATT CnAAnAATTC 480  
 CAACAGTAGC CGCAAGThGG TA 502

(2) INFORMATION FOR SEQ ID NO: 3908:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

50 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3908:

AAAAATGCA TCTCTACGTG CTAGAATAAA TATTGGTCAG CCAACCAAAA TAATCAACAC 60

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TAAGTATCAT ATTGCTTITG CACCTAAATA CAGAAGACAA GTGATATATG GAAAAATAAA 180  
 5 AAAGATATA GGGATTATAT TGCCTCAATT ATGTGAAAGA AAAGGTGTAG AGATAATTGA 240  
 AGCAGAGGCA TGTAAGATC ATATCCATAT GTTAGTTAGT ATACCACCCA AACTTGGGGG 300  
 TATCATCAIT TGTTGGGCTA TTTAAAAGGG AAAAAGTAGT TTAATGGATA TTGGGATAGA 360  
 CATGGCTAAC TTAAAGTATA GATATGGGAA ATAGGAAAGT 400

(2) INFORMATION FOR SEQ ID NO: 3909:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3909:

GGTTTAACTA TTGAAGAAAA TGTGCCGACA ATTAACAAGA TAAAAATGC GGTATATTCA 60  
 GCAGATAAAG CTTTACCTAA GATTAAATGAC TTTGCGAATA AAATTGTATA TTTGAATAAC 120  
 25 CACCAAGCGG ATTTAGATAA ATATGCCAAT GATTITAGAA AACTAGGAAA TTATAAAGGT 180  
 GATATTTTAG ATGCTCAGAA AAAATTAAAC GAGTCAATGS TGCTATTCCG CACTTAATAG 240  
 AAAAGGCTAA GTTGGATATT AGCTTTTAAA TAATTATATG CCGGAAAATT GGAAAAAGCG 300  
 30 TTTAAATTTT GCAGCTGGAT GAGGTGCCAC GCnGTTCCCT AAAAATTAATC CAGGGCTTAA 360  
 CATTGCGAGT CCAGGTATTG GnTCCAAGCT AATGGGGCCG 400

(2) INFORMATION FOR SEQ ID NO: 3910:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3910:

TTACCCGATA TCGGGAAGGT ATCCACGAAG GTGAAATTGT AAAATGGTTT GTTAAAGCTG 60  
 45 GAGATACTAT TGAAGAAGAC GATGTTT TAG CTGAGGTACA AAACGATAAA TCAGTAGTAG 120  
 AAATCCCATC ACCAGCATCT GGTACTGTAG AAGAAGTTAT GGTAGAAGAA GGTACAGTAG 180  
 50 CTGTAGTTGG TGACGTATT GTTAAAATCG ATGCACCTGA TGCAGAAGAT ATGCAATTTA 240  
 AAGGTCAATG TGATGATTCA TCATCTAAAG AAGAACCTGC GAAAGAGGGA AGCGCCACAG 300

GCCATGCCCT CCAGTTACGT TAAATACGCA CTGGAAAAAG

400

(2) INFORMATION FOR SEQ ID NO: 3911:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3911:

CGTGTAnCTC AAGTTATGGG TCCTGTAATT GATGTTGAT TTGAACATAA CGAATTCCTA 60  
 AAATTAATAA CGCCTTGGTT ATTGATGTGC CTAAAGAAGA AGGTACAATA CAACTAACAT 120  
 TAGAAGTTGC GCTGCAATTA GGTGACGACG TTGTTGCTAC AATTGCGATG GATTCAACTG 180  
 ATGGTGTTCA AAGAGGCATG GATGTAAGG ATACAGGCAA AGAAATTAGT GTACCTGTTG 240  
 GTGACGAAAC ATTAGGTCGT GTATTTAATG TACTAGGTGA AACAATTGAC CTTAAAGAAG 300  
 AAATTAGTGA TTCTGTTGCG CGCGATCCTA TCCATCGTTC AAGCACCAGC ATTCCGATGG 360  
 AACTTTTCAA CAGAAGTTCC AAATTTTtag GnACAGGGA 400

(2) INFORMATION FOR SEQ ID NO: 3912:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3912:

TTGTACAAGT TGAAGAAAAA TCAACACAAC CAAAAGGTAG AAAATTCAAA GATTTCATA 60  
 GTAAATTITAA TATAGCATCA GAAGCTAAG AAAATGAACC TATATCAGTC ATTGGTTATC 120  
 CAAATCCTAA TGGAATAAA CTACAAATGT ATGAATCAAC TGGTAAAGTA TTATCAGTGA 180  
 ATGGGAATAT AGTGTGTCG GATGCAATTA TTCAGCCTGG TAGCTCTGGT TCACCTATAT 240  
 TAAATAGTAA ACACGAnGCT ATTGGTGTA TCTATGCCG TAATAAGCCA TCAGGTGAAA 300  
 GCACCAGAGG GATTGCTGT TTATTCTCT CTTGAAATTA AGAAATTCCA TTGCAGATAA 360  
 TTTAGATAAA ThATTAGAC CTAnGACATT CACCAATCC 400

(2) INFORMATION FOR SEQ ID NO: 3913:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3913:

ACTCATTAG	CTCTACTAAA	CTCGTTGCGC	TCCTTCTCG	TTTCGTGAGA	TTCAAACGTT	60
TTCACTTCGC	CAAGCCATT	TTCTTTGTGT	TTACTTTTAA	TTTTCACGTT	TTAGACATAA	120
AAAAAAGAG	CCITGCGGTC	TCAATGnGGC	TCATCGCATC	CATTTTTTGC	CTGGCAACGT	180
TCTACTCTAG	CGGAAGTAAG	TTGGCTACCA	TCGACGCTAA	GAACCTTTCT	TGACTTGTGA	240
CAATCGCTTG	CTTCTTTCT	CTTCTTCGGC	TCTCGCTTAC	TCATTTAGCT	CTACTAAACT	300
CGTTGGGCTC	TTTCTCGTT	TCGTGAGATT	CAACGTTTTT	CACCTCGCCA	AGCCATTTTT	360
CTTTGGGGTT	TGChnTTTGA	ATTGGACGT	TTAGACATA			400

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(2) INFORMATION FOR SEQ ID NO: 3914:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3914:

TGGAATGAGC	GGATATAAGC	ATCTTTAGAT	AATGCACCAT	CACTAATGG	ATATTTATGT	60
CCAGTTGGAC	GCCAGAAATC	ATAAACGTCT	TCAGTGTAA	CAACAGCATC	TTCAATTTAAT	120
GCCAAAATGC	TTGGATTATG	TGCAATAACC	ATCGCAACTG	nGCCACACCT	TGTGTTGGCT	180
CGCCGCTGA	ATTCAATCCA	TAACGTGCTG	TATCTGTAGC	AATAACTAAT	ACTTTTTTCAT	240
TCGGTCTAGT	TGCTAAATAA	TCTTTAGCTA	ATTGAATTGC	TGGTGTGCA	GCATAACAAG	300
CTTCTTTCAT	TTCAAAGCAG	CGTGCAAAAG	GTTGGnATAC	CTAATAAGTT	GTGGAATTGT	360
nACAGCGGCT	GCITTACGAA	TTCCAATGTC	TGATTCCAGT			400

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(2) INFORMATION FOR SEQ ID NO: 3915:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 371 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3915:

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TCCTTATTTA TCCAGTTTCA TAGTCAATGT TTAAGCAAA ATCTTATTGA TGGTACAAAA 120  
 GTAGAAGCTA ATGCCAATAG GTATACATTT GTGTGGAAGA AAAGTATTCA AAATCACGAA 180  
 5 TCGAAATTGA ACGAAATTTC AAAACATTAT TATCGTGACT TAGTTGAAGA AAAAATAATA 240  
 CCAGAGATAA AAGAAGATGG AGATAGCGAT TTAACAATAG AnGAAATAGA TTAAATTGGT 300  
 10 AGTCATTTAG ATAAAGAAAT CGAGGTTTAA ATCATCTCTAT TGAGACGnGA TAGTACTCAA 360  
 ATTAGAAACA G 371

(2) INFORMATION FOR SEQ ID NO: 3916:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3916:

ACCATGACG ACGGTTAGGT TTATGAATGT TATTCCAAAT AGGTTTCATCT ATAAAAATAGC 60  
 25 TTTAGTTGGA AAAGATGAGA AAAAATATAA AGATGGACCT TACGATAATA TCGATGTATT 120  
 TATCGTTTGA GAAGACAATA AATATCAATT GAAAAAATAT TCTGTCGGTG GCATCACGAA 180  
 30 GACTAATAGT AAAAAAGTTA ATCACAAGT AGAATTAAGC ATTACTAAAA AAGATAATCA 240  
 AGGTATGATT TCACGCGATG TTTCAGAATA CATGATTACT AAGGAAGAGA TTTCTTGAA 300  
 AGAGCTTGAT TTAAATTGA GAAACAACCT TATTGAAAAA CAGATCTTTA CGGTAACATG 360  
 35 GTTCAGGAC AATCGTATTA AATGAAAACG GGGGAATATA 400

(2) INFORMATION FOR SEQ ID NO: 3917:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 412 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3917:

GAGGAAATTA TTAACCTTnC GCATCGTATG GGCcTGAAG GAATAACAac CTTTACCTT 60  
 GGAGATTGAG CTAAATATACC TTCTAAGTTA TCTCGGTGTA ATTCTGGTGT GTGTACGCCA 120  
 50 CCACCAATG GGCTACGAAT TGTTACAGGT GCAGTTTGTAG TACCGCCTGA ACGGAAACGA 180  
 GTACGTGCAA TTTGTCCAGC AATCGCATCA AATACTTCGA ATACGAAACC TAAGAAATTGT 240

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GATTGAGCTA AAGGTGTATC GAATACTCTA TCCTCACCAC ATTCTTTTG TAGTCCTTCA 360  
 GTAACACGGA AAACACCGCC GTTAACACCA ACGTCTTCAC CAnAATnAAA AC 412

(2) INFORMATION FOR SEQ ID NO: 3918:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3918:

ATAGATTGCT GAGTGACAAT ACTTCAGGAn TCGCATATGC AGGCCCAATA CCCATAATTT 60  
 TCGGGTCAAC GCCTACTGCC TTA AAAACCAA CGAATCGTGC AATAGGTGTC ACGCCGAGTT 120  
 CTTTCACITT ATCTCCAGAC ATTA AAACTA CAAATCCTGC ACCATCAGAA AGTGGGGCAG 180  
 ATGTTCCCTGC AGTCATAGTG CCGTCAGCTT TAAATACTGT ACGTAATTG GCTAATGCCT 240  
 CCATCGTGGT GTGAGGGCGT AThAAATTC TCTGGTCAA AGATATTGTT GTGTACTTTT 300  
 GGTCTCTGCT TTGTATATTC AACTGAGTTT ACTTGTATTG GGAThATTTC ATCTTTGGAA 360  
 CCGACCATCA CGGTGTGCGT TCATAGGCAC GTTGATGnAC 400

(2) INFORMATION FOR SEQ ID NO: 3919:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3919:

CAAGGGCAAC AAGTGGCAA CGGCAATTAT TTAGAACAAA TTGGTCGTAA CCTTACnAAG 60  
 AAGCACGTGA CGGTTTATTA GATCCAGTCA TTGGTCGTGA TAAAGAAATT CAAGAAACTG 120  
 CTGAAGTTTT AAGTAGACGA ACTAAAAACA ATCCTATATT AGTTGGAGAA GCTGTGTTG 180  
 GTAAACTGCG GATTGTTGAA GGTTTAGCAC AGGCAATCGT TGAAGGAAAT GTACCAGCAG 240  
 CAATCAAGA CAAGAAATTT ATTCTGTAG ACATTTCATC ATTAGAAGCT GGAACGCAAT 300  
 ATCGTGTGCG TTTTGAGGAA AATATTCCAA AATTAATCGA GGTGTTAAnC TTCACAAATG 360  
 CCGTACTATC TTTGATGAAn CCATCAATTA TCGGTTCAGT 400

(2) INFORMATION FOR SEQ ID NO: 3920:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3920:

10 CTTATCCCGT CCACACATAG CTACCCAGCT ATGCCGTTGG CACGACAACT GGTACACCAG 60  
 AGGTATGTCC ATCCCGGTCC TCTCGTACTA AGGACAGCTC CTCTCAAATT TCCTACGCCC 120  
 ACGACGGATA GGGACCGAAC TGCTTCACGA CGTTCTGAAC CCAGCTCGCG TACCGCTTTA 180  
 15 ATGGGCGAAC AGCCAAGnCC TTGGACCGA CTACAGCCCC AGGATGCGAT GAGCCGACAT 240  
 CGAGGTGCCA AACCTCCCCG TCGATGTGAA CTCTGGGGG AGATAAGCCT GTTATCCCCG 300  
 GGGTAGCTTT TATCCGTGTA GCGATGGCCC TTCCATGCGG GAAnCAACGG ATTCACTAAA 360  
 20 GTCCGTCTTT TCGAACCTGG CTCGGACTTG TAGGTCTCGG 400

(2) INFORMATION FOR SEQ ID NO: 3921:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3921:

CGGGTGGGC AGGTATGTTG TATTACCGTT CACAGCAGCA TCACTTTGAA CAACATTTGT 60  
 35 TAACGGATTA TTTGGCAATT CGGTTAGTTG TCGAACAAAT GCTAGTTGGT GATGAGTTTA 120  
 AGTCAGTCGC TAAAGATTGT GAAAGTAGAT CGGAAAATG GTTTAAGCAA ACTGTTGCAT 180  
 40 CATGGTGTTA CTACAGTGA TATGCCTAGC GATGTATTAC TACAACATGA CGTCAATGAA 240  
 ATTCAAACGT TTATTCAATT TGGCAGCAAC TATGGAATAA AAATGTATTT AAAATTITATG 300  
 GCTnAATTGC CnGGGGAAAT GACATACGGG ATCTCAGTTT AAAACAAAAA TTAAGCAGG 360  
 45 TCATGGAAAG TGTTGGCGGC GCCTTAGGTG TnAACCCAGT 400

(2) INFORMATION FOR SEQ ID NO: 3922:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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GTGCGCTCTA ACCAGCTGAG CTATAGGCCC ATTTTTTTGA ATGTATAATA AACATTCAAA 60  
 5 ACTGAATACA ATATGTCACG TTATTCCGCA TCTTCTGAAG AAGATGTTCC GAATATATCC 120  
 TTAGAAAGGA GGTGATCCAG CCGCACCTTC CGATACGGCT ACCTTGTTAC GACTTCACCC 180  
 CAATCATTTG TCCACCTTC GACGGCTAGC TCCTAAAAGG TTACTCCACC GGCTTCGGGT 240  
 10 GTTACAACT CTCGTGGTGT GACGGGCGGT GTGIACAAGA CCGGGGAACG TATTCACCGT 300  
 AGCATGCTGT ATCTACGTTT ACTAGCGATT CCAGCTTCAT GTAGTCGAGT TGCAGACTAC 360  
 AATnCGAACT GAGGAACAAC TTTTATGGGG TTTGnTTTn 400

15 (2) INFORMATION FOR SEQ ID NO: 3923:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 20 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3923:

25 AGTAAGTAAA ATATAGATT TACCAAGCAA AACCGAGTGA ATAAAGAGTT TAAAATAAGC 60  
 TTGAATTCAT AAGAAATAAT CGCTAGTGTT CGAAGAAGCT CACAAGATTA ATAAACGCGTT 120  
 30 TCCTGTAGGA TGGAAACATA GATTAAGTTA TTAAGGGCGC ACGGTGGATG CCTTGGCACT 180  
 AGAAGCCGAT GAAGACGTT ACTAACGACG ATATGCTTTG GSGAGCTGTA AGTAAGCTTT 240  
 GATCCAGAGA TTTCGGAATG GGGAAACCCA GCATGAGTTA TGTCATGTTA TCGATATGTG 300  
 35 AATACATAGC ATATCAGAAG GCACACCCGG AGAACTGAAA CATCTTAGTA CCCGAGAGA 360  
 AGAAAGAAAT TCGnTCCCTA GTACCGCGAn CGAAACGGGA 400

(2) INFORMATION FOR SEQ ID NO: 3924:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 45 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3924:

50 ATGCGATACG TAGCACAGCT GCAACAATCC ATGCTAGTAA AATCGGAGAC ATCTCTGTAC 60  
 CTTCAAACTA GCAATTGTAT TTCCGACACC GCCGTCAATT AATACITGTT TAATGIACCG 120  
 CCACCGCCAA TAATCAATAA CATCATTCGG ATTGGATAAA TCGCATTCTG CACTGATTCC 180

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GCTATTAGCA TGGCTGTCCC TGCTGTTCCCT ATCATATAAA TGATAGATTC AAATAGATTT 300  
 GTAGGGTTGT CATGCCAGT TACAAGTTGC GTTGATCGTn GACACTAACA TTAATATGAC 360  
 5 TGGTAATGTT GCTGTTAATA AACTCATACC AAnTCCGGGC 400

(2) INFORMATION FOR SEQ ID NO: 3925:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 525 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3925:

GGCTGGGCTA GCTGGATTCT AACCAACGAG TGACGGAnAn AGGTCCGTTG CTTACCGCT 60  
 20 TGGCTATAGC CCAATATATA GATGCTGGAG GGGGGCAGAT TCGAACTGCC GAACCCGAAG 120  
 AGCCGGATTTC ACAGTCGGCC GCGTTTACCA CTTGCTACC CCTCCAGCTT ATTATATAA 180  
 TTTAATAATC AAAATGGTGG AGAATGACGG GTTCGAACCG CGACCCCTCT GCTTGAAGG 240  
 25 CAGATGCTCT CCCAGCTGAG CTAATTCTCC AAAATAATGA CTCCTACGG ACTCGAACCC 300  
 GTGTTACCGC CGTGaAAGG CGTGtGCTTA ACCcTTGGAC CAAGGAGCCA TGGCTCaCAG 360  
 GTAGGACTCG AACCTACGAC CGATCGGTTA AcAGCCGATA GCTCTACCAC TGGAGCTGAC 420  
 30 TGTGGATTAA TATTATGCCT GGCAACGCTT TGAnnTAGC GGAAnTGAAT TCGGACTGAC 480  
 CATCGACGCh AAGGAGCTGA ACTTCTGTGT TCGGGCATGG GGAAC 525

35 (2) INFORMATION FOR SEQ ID NO: 3926:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3926:

45 TGTTATTGTT CAAAATCATG ATCAAGATCA GTATATCGTT GCTTATTATG AAGCGATGCA 60  
 TACATTATCA CATAATAAGA TTAAATCACA ATTACGTATG ACCTTACCGG AGTACATGAT 120  
 ACCACTTAAT TTATCGATA TTGAGCAAA TCTATTACT ATTAATGGGA AATTAGATAA 180  
 50 GAAGGCATTG CCTATCATGG ACTATGTCGA TACGGATGCC TATGTAGCAC CGAGTACAGA 240  
 TACCGhACAC TTGCTATGCC AAATTTTtGC AGATATTTTA CATGTGAATC AAGTAGGTAT 300

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TCCGGATAGA GGCATCCACT GGGGAACGGT TACCAATTGG 400

(2) INFORMATION FOR SEQ ID NO: 3927:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3927:

15 TATCGATCAA TTTCTATCGA GTTGGACAAT GCCGAACGTG ACAAAGTTT TACCATGCAT 60  
 GGTTCATTT AGCGCAACAT GACCATAGTT TTAATAAGC ACAGCCGCA AGTGATTAAA 120  
 GGCTTACCCA ATGATCCGTA AATGACGATA GAGTCAGTAT TAATCTATT TTCAATAGAT 180  
 20 CAGGAAGACT ACCAAGCTTA TGTGAAGGA CATCTTTGG CGTTACCGGG TTGGGAGGT 240  
 ATGTTGTATT ACCGTTACA ACAGCATCAC TTGGAACAA CATTGTGTAA CGGATTATTT 300  
 GGCAATTCGG TTAGTTGTCG AACAAATGCT AGTTGTTGGA TGAGTTTAA TCCATCGCTA 360  
 25 AAGATGTGGA AATAGnCGG AAAATGGTTT TAAGCAAACT 400

(2) INFORMATION FOR SEQ ID NO: 3928:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3928:

GTGCACCTAA CGCTGAATA TCGCCTTCTC GTGTATAGCA GACGGAATCA TTTTGTGTC 60  
 40 AnTTTGTAA ATATAGGCC TCCAATGAGT GTACTGGAAT GGCAATAATC ATACCATACA 120  
 GTAATACATC TCCAACATTT GCCTTTAATT CTTTGGGAT GACTACCGGT CCTGGATGTG 180  
 GTGGTAAAAA GCCATGTGTC ACTGATAAAG CTGTTACCAT AGGTAGTCCCT AGTTTAAACA 240  
 45 CTGAACATT TGGCGTTTT GCTACTGTAA ATACTAATGG AATCAGTAAG ACTAAACCTA 300  
 CTTCAAAGAA CAATGCAATA CCGACGATAA ATGCTGGCAA CAAGCATTCG CCCATTGGTA 360  
 CATGGTTTTT GGACCAAAAT TTTGGAATCA ACGTGTCTGG 400

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(2) INFORMATION FOR SEQ ID NO: 3929:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3929:

	CTCAAGGTGT TGCCTATACA GCTAAAAAAC TTAATTTAAA CGCTGTTATC TTTATGCCAG	60
10	TCACTACACC TTACAAAAG GTAAATCAAG TAAAGTTCTT TGGAAATAGT AACGTTGAAG	120
	TTGTACTCAC TGGTGATACA TTGATCACT GTTTAGCTGA AGCTTTAACT TATACAAAGTG	180
	AACATCAAAT GAACTTTATA GATCCATTCA ATAATGTTCA TACAATTTCT GGACAAGGTA	240
15	CGCTTGCTAA AGAAATGCTA GAACAAGCAA nGCTGACAA TGTTAACTTC GCATTATCTA	300
	TTTGCGCAA TTGGTGGTG CGGTTTAATT TCAGGTATTT CGTACTTACT nTTAAACCT	360
	ATTCACCTAC CACGnAAATT ATAGTGTTG AACCCnAGT	400

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(2) INFORMATION FOR SEQ ID NO: 3930:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 374 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3930:

	ATATGATCCT ATGAAGCAAT TTTATGTAGT AAGTGGTTCT AAACATGACG CCCATTGCT	60
	CTGTGAACAT TTATATGACG AGGTTATGGC TGTTTGCTAA nCCCAAATGA TACATCGAAT	120
35	GGCACATATC ATTGCTGCGA ATATGATTAC TATGATGCAT TTATTAAGCA GCAAGAAAAT	180
	GTAACATATA TTTCACCGA TCGTGCGAT GCTAATACAG TGTTATGTCA CTAATTTATA	240
	AAAAATAAAT GAATAAGTAA GGTTCAAACC GAGAGAATAT ATTCGTGTTG AAGCCTTATT	300
40	TGTCGTTGTG CCAAAATTGA ACGnTTTAGA TGGCAATAAG CATGACCATA CAGATTGTGT	360
	ATTATTTCCTA TGnA	374

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(2) INFORMATION FOR SEQ ID NO: 3931:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 387 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3931:

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TGCTCTTTC GCTAGCCTCG TATGGGCATC TTTATCAATA ATATACTCGC CATGACTATC 120  
 TTTGCGTTTT AAGTCAATTT CATCAAACCT TTTCCACCT GTTAAOCSGT CACCACATAG 180  
 5 TCGTTTCCGA CCAAATGTAG CCTCTTGTTC TTCCAGCGCA GTACGATCCC ACGTTTCAAT 240  
 GTGTATTTGA ATACGCTGA CAACGCAATA AGTTCCATGT TTGCCCCATC CGTCATCAAT 300  
 AAACACATAA TCTTTAAGTT GATTATCTT CCTAGGATTA ATTGTTCCAC TTTAAAATGC 360  
 10 CATTNAAATT CTAGGTGTTT CCnTAnC 387

(2) INFORMATION FOR SEQ ID NO: 3932:

(i) SEQUENCE CHARACTERISTICS:  
 15 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3932:

AAGGTAATAA TCCTGTAGTC GAAATGTTG TCTCTCTGA GTGGATCCTG AGTACGACGG 60  
 25 AGCACGTGAA ATTCCGTCGG AATCTGGGAG GACCATCTCC TAAGGCTAAA TACTCTCTAG 120  
 TGACCGATAG TGAACCACTA CCGTGAGGAG AAGGTGAAAA GCACCCCGGA AGGTAGnTGA 180  
 AATAGAACCT GAAACCGTGT GCTTACAAGT AGTCAGAGCC CGTTAATGGG TGATGGCGTG 240  
 30 CCTTTGTAG AATGAACCGG CGAGTTACGA TTTGATGCAA GGTAAAGCAG TAAATGTGGA 300  
 GCCGTAGCnG AAGnAnGTTT TGAATAGGGC GTTTAGTATT TGGTCGTAGC CGATAACCAAG 360  
 GTGATTCTAC CCTTTGGTCA GGTGAAAGTT CAAGTAACAT 400

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(2) INFORMATION FOR SEQ ID NO: 3933:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 40 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3933:

CGCATGGTTG AAACATTGAC TTATATTAAA GAGTTTATGA ACCAAGTTGA GTCGCATAGC 60  
 TAGTATGAAA CGTGGTGTGC GCATGGGAAC TATCAAGCTT TGAAGATGTG GTACTACATG 120  
 50 CGTTGAATTA GGGATCGGTA CTTTATATGA AGACGTGCTG CTTCATTAA ATGAGTGATG 180  
 CGATTTTGGC ATGAAGGTCA CCTTAAATGT ACATTGTTGT AATAAAATTG CCTATAAATT 240

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AATTGTAAAA AGAAAACCAT ACGCTATGTG nTGCCAAGGA AAAGGTTCTA CCATTGTCAC 360  
 nAAAAATGCA TCTCTACGTG CTAGGAATAA ATATTGGGTC 400

(2) INFORMATION FOR SEQ ID NO: 3934:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3934:

TTTGACGTTT TAGACATAAA AAAAGAGACC TTGCGGTCCA GATGGGGCTC ATCGCATCCA 60  
 CTTTTTGCCCT GGCAACGTTT TACTCTAGCG GAAnTAATCG AACTACCACG GACGCTAAGG 120  
 AGCTTAACTT CNGTGTTCGG CATGGGAACA GGTGTGACCT CCTTGTCTATA GTCACCAGAC 180  
 ATATGAATGT AAATTATACA TTCAAACTA GATAGTAAGT AAAAGTGATT TTGCTTCGCA 240  
 AACATTTATT TTGATTAAAG CTCGATCGA TTAGTATTCT TCAGCTCCAC ATGTCACCAT 300  
 GGCTTCCACC TCGAACCTAT TAACCTCATC ATCTTTGanG GATCTTATAA CCGAATTGGG 360  
 AAnCTCATCT GAAGGGGGCT CAGCTAGATG CTTCAAnACTT 400

(2) INFORMATION FOR SEQ ID NO: 3935:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 393 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3935:

TGTTCTTTTT GGGCAGTGGG ACACAAATGG ATATTTTCGG CAAAATTATAT TTCGTTCTGnT 60  
 CCCACCCCAA CTGGGCACAC TATTGTAAGC TGACTTTTCG CCAGCTTCTG TGTTGGGGCC 120  
 CCGCCAACCTT GCCATTGTCT GTAGAAATGG AGGAGCTAAT TTCTCTGTGT CCGGGCTCCA 180  
 CCCCACCTTG CACACTATTG TAAGCTGACT TTCCGCCAGC CTCGTGTGTT GGGCCCCGCC 240  
 AACTTGACACA CTATTGTAAG CTGACTTTCC ACCAGCTCTT GTGTTGGGCC CCGACTATTT 300  
 TTGAAAAGAG CGTGTTCAC GGGCATTGTT TTACAGTCAA CTA CTGCTAA AATAAAATTA 360  
 ACGAGCTTAA GGCTTTGGnT TCTGTCCCAA GCC 393

(2) INFORMATION FOR SEQ ID NO: 3936:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3936:

10 AAAAAGAAGA CAACCAAGCC CAATAATGGA CTGGCCGCGT AATAATnGTG GCTCTAAAAG 60  
 TTGTATTTTA AAAATAGTTC TTAAATTAT ATACCCACCA CATTGGGTGG AGAACCTAAA 120  
 AAAAAGCACT TCCAAAAAT GGAAGTGCA AGTAGTGAGC CATAGAGGAT TCGAACCTCT 180  
 15 GACCTCTGA TTAAGTCA GATGCTCTAC CAACTGAGCT AATGGCTCTA ATGGCTGGGC 240  
 TAGCTGGATT CGAACCAACG AGTGACGGA TCAAAAGTCC GTTGCCTTAC CGCTGGCTA 300  
 TAGCCCAATA TATAGATGGT GGAAGGGGGC AGATCGAACT GCCGAACCCG AGGAGCGGAT 360  
 20 TTACAGTCCG CCGCGTTTAG CACTTCGCTA CCTCCAGCT 400

(2) INFORMATION FOR SEQ ID NO: 3937:

25 (1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 609 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3937:

GGTTTAACAC GCCTGCCTGT CACGCAGGAG ATCGCGGGTT CGATTCCCTG TCGAGACCGC 60  
 35 CATTATTATT ACCATTACGG TTCAGTAGCT CAGTTGGTAG AGCAATGGAT TGAAGCTCCA 120  
 TGTGTCGGCA GTTCGACTCT GTCCTGAACC ATTCTTAATT CATGGCGGTT GTGTGAAGT 180  
 40 GGTTAACACA TCGGATTGTG GTTCCGACAT TCGAGGGTTC GATCCCCTTC AGCCGCCCCA 240  
 TAATCGTTTA CATTAGCGGG TGTTAGTTTAA TGGCAAAACC TCAGCCTTCC AAGTGATGT 300  
 TGTGGGTTCC ATTCCCATCA CCCGCTCCAT TATTTTCTAT TATTCACAG TAGTCAGTG 360  
 45 GTAGAGCTAT CGCGTGTAA CCGATCGGTC GTAGGTTTGA GTCTTACCTG TGGAGCCATG 420  
 GCTCTGTGt CAAGCGGTTA AGACACCGCC CTTTCACGCG GGTAAACAGG GTTCGAGTCC 480  
 CGTAGAGTyC ATACAAGCAG AAGTGnAAAT ATCGCTTCTG TTTTTTtATt ACATAwTTAA 540  
 50 TkGTTgAGG aAGtTGTcCG AgCyGGGCCG AAGGaGCACG CCTGGAATG TGTAAGCGTT 600  
 CACAAGCTT 609

(2) INFORMATION FOR SEQ ID NO: 3938:

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(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3938:

10 TAAAGTTGTT CTCAGTTCGG ATTGTAGTCT GCAACTCGAC TACATGAAGC TGGAATCGCT 60  
 AGTAATCGTA GTCAGCATGC TACGGTGAAT ACGTTCCTGG GTCTTGTTACA CACCGCCCGT 120  
 CACACCACGA GAGTTTGTTAA CACCGGAAGC CGGTGGAGTA ACCTTTTAGG AGCTAGCCGT 180  
 15 CQAAGTGGGA CAAATGATTG GGTGGAAGTC GTAACAAGGT AGCCGTATCG GAAGGTGCGG 240  
 CTGGATCACC TCCTTTCTAA GGATATATTC GGAACATCTT CTCAGAAGA GCGGAATAAC 300  
 GTGACATATT GTATTCAAGT TTGAATGTTT GTTCATTCAA ATTAATGGGC CTATAGCTCA 360  
 20 GnGGTTAnAG CGCACCCCTGA TnAACGTGAA GTCGGTGGTT 400

## (2) INFORMATION FOR SEQ ID NO: 3939:

25 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3939:

AGTTTGAAT GTATAAATTA CATTCAATG TCTGGTGACT ATAGCAAGGA GTTCCACCTG 60  
 35 TTCCCATGCC GAACACAGAA GTTAAGCTCC TTAGCGTCGA TGGTAGTCGA ACTTACGTTC 120  
 CGCTAGAGTA GAACGTTGCC AGGCATAATA TTAATCCACA GTAGCTCAGT GGTAGAGCTA 180  
 40 TCGGCTGTTA ACCGATCGGT CGTAGGTTGC AGTCCTACCT GTGGAGCCAT GGCTCTTGGT 240  
 CAAGCGGTTA AGGACACCGC CCTTTCACGG CGGTAACAGC GGTTCGAGTC CCGTAGAGTT 300  
 CATTATTTTG GAGAATTAGC TCAGTAGGGA GAGCATCTGC CTTACAAGCA GAGGGTCGGC 360  
 45 GGTTCGAAC CTTnCTTTT CCACCATTTC GTTATTAAAn 400

## (2) INFORMATION FOR SEQ ID NO: 3940:

50 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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ACACAACAGC TGTTCAAAA ATGATTGGTA CAACTGCTGG TTATGTTGGT TATGATGACA 60  
 ATTCAAATAC GTTAACTGAA AAAGTACGCC GTAATCCATA CTCAGTCATT CTATTTGATG 120  
 5 AAATCGAAAA AGCAAAATCCA CAAATTTTAA CATTGTTATT ACAAGTAATG GATGATGGTA 180  
 ATTTGACTGA TGGTCAAGGT AATGTCATCA ACTTTAAAAA TACAATTATT ATTTGTACAT 240  
 10 CAAATGCTGG CTTTGGCAAT GGCAATGACG CTGAAGAAAA AGATATTATG CACGAAATGA 300  
 AAAAATCTCT CCGCCCTGAA TTCCTTAACC GCTTCAACGS CATCGTGAAT ThCTTACATT 360  
 TAGATAAGGT GCCnTGCAGG TATCGTCCAA CTATTATTAG 400

15 (2) INFORMATION FOR SEQ ID NO: 3941:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 20 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3941:

25 ATACAATTTT AAATCTGTAT GTGTGAATCC AACACATGTT AAATATGCAG CAGAGCGnCT 60  
 AGCTGATTCA GAGGTGCTCG TTGTACGGT AATAGGATTC CCATTAGGTG CGTCGACAAC 120  
 30 TGCAACGAAA GCATTTGAAA CAGAAGATGC AATTCAAAAA GGTGCAGATG AAATTGACAT 180  
 GGTCATCAAC ATCGGCGCAT TAAAAGATGG ACGTTTTGAT GATGTACAAC AAGACATTGA 240  
 AGCAGTGGTT AAAGCTGCGA AAGGTCACAC AGTAAAAGTG ATTATTGAGA CGGTATTGTT 300  
 35 GGACCATGAC GAAATTGTAA AAGCGAGTGA TTAACAAAAG CGGCTGGTGC GGACTTCGTT 360  
 AAAAATTICA GCAGTTTTTG CCAGTGGCnG TGCAGTCA 400

(2) INFORMATION FOR SEQ ID NO: 3942:

- 40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 45 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3942:

50 CTCGTGATCA AAGCTTACTT ACAGCTCCCC AAAGCATATC GTCGTTAGTA ACGTCCTTCA 60  
 TCGGCTTCTA GTGCCAAGGC ATCCACCGTG CGCCCTTAAT AACTTAATCT ATGTTTCCAC 120  
 55 CATTTTTATA AGTCAAAAGT TAACATGAAG TTACGTTCTT TTATAAAAAA ATTTAAACGC 180

TATTTAAAC TCTTTATTCA CTCGGTTTTG CTTGGTAAAA TCTATATTTT ACTTACTnAT 300  
 CTAGTTTTCa ATGTACAAAT AATGGTGGAG ACTAGCGGGA TCCGAACCCG CTGACCCnAC 360  
 CnGCGTGCAa AGCAGGCGCT CTACCCAGCT TGAGCTAAGG 400

(2) INFORMATION FOR SEQ ID NO: 3943:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3943:

CGCTACACTA CGAGACCATT AGTAAACGG AGGAAGAGGG ATTCGAACCC CCGCGAGCCG 60  
 TTAAGCCCTT GTCGGTTTTT AAGACCGATC CCTTCAGCCG GACTTGGGTA TTCTCCAAA 120  
 ATTATATGGA CTTGTCAGGA CTCGAACCTG CGACCGAACG GTTATGGAGC CGTTAGCTCT 180  
 GAACCAACTG AGCTAAAGST CCTAAATATA ATTTTACAAC TAATAAATAG TGGCGGTGGA 240  
 GGGATCGAA CCCCCGACCT CACGGGTATG AACCGTACGC TCTAGCCAGC TGAGCTACAC 300  
 CGCCTTATAT AGTTTGTAa TnAnnATGGT GGGAGACTAG CGGGGTTCGA ACCGCTGGAC 360  
 CTCCTCGGTG CCAAAGCAGG CGGCTTCTAC CCAGCTGGAG 400

(2) INFORMATION FOR SEQ ID NO: 3944:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 406 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3944:

CCAAAAATGC ACCTTGTGCT TTATTGGGAa AATCAATATn GntAGGGGGT ATAAGATGCA 60  
 CCTACTTTAA CTGTCGCCAA CATCGCCGCA ATCATTTCaA AACTACGTTT TGTAaACAAg 120  
 GCAACCCGTT GACCATTGCC CACACCATTT GATAGGAGCA TGTGCGCAAT GGCATCCACA 180  
 TAGTTGCGTA ATGTTTCATA CGTCATTGTC AAATCATTCa TGACTAGCGC AACATGATTA 240  
 CCTGTGCGTG AGAAACTTCA TTAAAGTAAC TTATGATAGA TTTATTTCcC GGGACATTAA 300  
 GCATTGATC GTTAACATGC GTATTGACCC AATTAGAAG TTCTCCGTG CCGTTTGGTA 360  
 TATCACAaAT TTGTAGTGTA wCtTGaTGCT TCmAaATaTc AATCAa 406

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3945:

CAATGACAAC AGCAACTGAG ACAGTGTCAA ACGCTTAATA ATAATGATGT AGTGTGGAAT 60  
 AATACCGCAT TAAATGTACC AACTAAAACA AATGAAAATG GTTCAGGAGG ACATCTAACT 120  
 TTAAAGGAAA TTCAAGAAGA TGTTGTCAT TCITCAAATA AACCAGAGCT AGTTGCAATT 180  
 GCTGGAACCA GCATCTGAAT AGACGAAAA AGAGAAGTTA GACGTGCGGC ACCGGCAGAT 240  
 CCTGAATGCC AACTCCAGCA GATCCAGCG CTGCAGCGT TAGGAAACGG TGGTGACCA 300  
 GTTGCAATTA CAGCGCCATA TACGCCAACA ACTGATCCTA ATGCCATGan GCCAGACAA 360  
 ATGGCACCTTA ACGAnGCTTG TTCATTGAT GGACAnGGTA 400

(2) INFORMATION FOR SEQ ID NO: 3946:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3946:

CTCGTGCGCA TAAAGTACCA GTTCATAGCA ACGTTTGThT TAATAGGnTC TGAACGATA 60  
 CGTGTGCGG GTTCTGTAAA TGAATAGACC AAAGCATCTT GCATACCAAC AACTATATTT 120  
 GCTGCAAAATC CTCACACAGC GGAAnATATG CCATCGTTAG TCCAGCGATA GGGTGATAGC 180  
 CAATTTTAAAT AAAAAGCATT GCTGCAACGG CCGCAAGAT AATTGTGCA GCATCGCCGG 240  
 CTGTACTACC TAAAAATCCA ATTAATATAA TAGTCGGTAA AATTAAGAAA CGTGGTGCGC 300  
 GATTACAAC AGAAATCATT AACTTATCGA AGTATCCTGT TTCTCTGCA ACACCAATAC 360  
 CAATCATCAC TGCTAGGTAC TAAGCCTAAT GCTGGGnACT 400

(2) INFORMATION FOR SEQ ID NO: 3947:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 361 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3947:

5 GCGGGCCAGA GGACTTGGAA CCCCCAACCT ACTGATTACA AGTCAGTTGC TCTACCAATT 60  
 GAGCTAGGCC GGCAATATGT AAGAATAAAT GGTGGAGAAT GACGGGTTCG AACCGCCGAC 120  
 CCTCTGCTTG TAAGGCAGAT GCTCTCCAG CTGAGCTAAT TCTCCGATTT AAAACTGCCT 180  
 10 GGCAACGTTT TACTCTAGCG GAATTAATTC GACTACCAT CGACGCTAAG GAGCTTAACT 240  
 TCTGTGTTGC GCATGGGAAC AGGTGTGACC TCCTTGCTAT AGTCACCAGA CATATGAATG 300  
 TAATTTATAC ATTCAAACT AGATAGTAAG TAAAGTGAT TTGCTGCTCG CAAACATTT 360  
 15 A 361

(2) INFORMATION FOR SEQ ID NO: 3948:

(i) SEQUENCE CHARACTERISTICS:

20 (A) LENGTH: 382 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3948:

25 TTCGTCAGA CCTGACATG GTTCATGGGT TCATATTGCA TAGSACCGAA ATCTTCAAAC 60  
 30 ACTACGTGCT TTGGGCAGAC TTCGCAAAAA TACGGCCTCA ACAAGGAAT TAAGCCTGCG 120  
 ATAAAGCGGA TTTCGAGTAC AGGGAACCGC TACCTCCCCA CCTAGCACGG CAAGATATAT 180  
 ATTACTATAT TTTAATAGTT AATTGCAAGT ATAAATCATT TATATCATTT TTTACTTTAT 240  
 35 ACGACGTCTT GAGAAGTCAT TAATTTAAAT TCATTGCAA GATGTTTTGA AATATTATAT 300  
 TGAAACGGCA TTGTATTTTC TAAATACACA nTACTTCGAA CTGTTGcGnA ATAGGCCACC 360  
 GATACATCAC CAACAATTGG nA 382

(2) INFORMATION FOR SEQ ID NO: 3949:

(i) SEQUENCE CHARACTERISTICS:

45 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3949:

50 GCCAAGCCAT TTTTCTTTGT GTTACTTTT TATTTGACG TTTTAGACAT AAAAAAAGA 60  
 GACCTTGGCG TCTCAATGCG GCTCATGCA TCATTTTTT GCTTGSCAAC GTTCTACTCT 120

TTGCTCTTT CCTCTCTTC GGCTCTCGCT TACTCAITTA GCTCTACTAA ACTCGTIGCG 240  
 CTCTTTTCTC GTTTCGTCAG ATTCAAACGT TTTCACITCG CCAAGCCATT TTCTTTGTG 300  
 5 TTGCTTTTT AnTTTGACGT TTAGACATA AAAAAAAGAG ACCTTGGCGn CTCATGnGG 360  
 GCTCATCGCA TCCAATTTT GGCTTGGCAA CGTCTCTACT 400

(2) INFORMATION FOR SEQ ID NO: 3950:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 389 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3950:

ACTCGGTTT GCTTGAAAA TCTATATTTA CTACTTATC TAGTTTCAA TGTCAATTT 60  
 CTTTITAGTC AAGCGCTCGC ATACTGCTTT ATTTTCATAA GCAATATCAC TTTAACCAAA 120  
 AAATATTGTA ATGTTAAATA AACATTCAAA ACTGAATACA ATATGTCAGC TTTATCCGCA 180  
 25 TCTCTGAAG AAGATGTTCC GAATATATCC TTAGAAAGGA GGTGATCCAG CCGCACCTTC 240  
 CGATACGGCT ACCTTGTTAC GACTTCACCC CAATCATTTG TCCACCTTC GACGGGTAGC 300  
 TCCTAAAGG nTACnCCACC GGCTTCGGGT GTTACAAACT CTCGTGGTGT GACGGGCGGT 360  
 30 GTGTACAAGA CCCGGAACG nATTACCCG 389

(2) INFORMATION FOR SEQ ID NO: 3951:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 377 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 35 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3951:

AAAGCTCGAC TGTTTACGA TGTTGAAAA CAAGATTATG TACCTGTATC GCAACCACAA 60  
 45 TTACCAATTT TAAATGAATT TAATAAGAC TTAGTGATA ACCTTGATAC CATATTCAAT 120  
 GCGCAAGACG AnCGGACTA TTTTATGGG AGACATTACG TAATAATTC TATTACTCTG 180  
 50 CTATCAATGT ACCTAAAGCT ACCGATGATT TCCGAGACAT AGACCGTGGC CTGTCTGGG 240  
 GGTCAACTG GAAACTGGT CCATTCCAAT TATGGGATGC AATGGGATAC GAACGTGTTA 300  
 AAACnTGAT GGAAGACGA ACTTGGGAGA CTTACCACAA TGGGATTAGT GAnTTAGATG 360

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## (2) INFORMATION FOR SEQ ID NO: 3952:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3952:

CAAAGGGCAG CGAAACCGCG AGTCCAGAGC AAATCCCAT AAGTTGTTCT CAGTTCGGAT 60  
 TGTAGTCTGC AACTCGACTA CATGAAGCTG GAATCGCTAG TAATCGTAGA TCAGCATGCT 120  
 ACGGTGAATA CGTTCGCGG TCTGTACAC ACCGCCGCTC ACACCACGAG AGTTTGTAAC 180  
 ACCCGAAGCC GGTGGAGTAA CCTTTTAGGA GCTAGCGTC GAAGTGGGAC AAATGATTGG 240  
 GGTGAAGTCG TAACAAGGTA GCCGTATCGG AAGGTGCGGC TGGGATCACC TCCTTTCTGA 300  
 AGGATATATT CGGGAACATC TTCTTCAGAA GAGCGGGAAT AACGTGACAT ATTTGATTCA 360  
 GHTTTGGAAT GTTTnTTAA CATTnCAAAA AAATGGGGCC 400

## (2) INFORMATION FOR SEQ ID NO: 3953:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3953:

TGATTTTGAC GTTTTAGACA TAAAAAAG AGACCTTGGC GTCTCAAATG CGGCTCATCG 60  
 CATCCATTTT TGGCTGGCA ACGTTCTACT CTAGCGGAAC GATTAATGGCT ACCATCGACG 120  
 CTAAGAACCT TTCTTGACTT GTGACAATCG CTGCTTCTT TCCTCTTCTT CGGCTCTCGC 180  
 TTACTCAITT AGCTCTACTA AACTCGTTGC GCTCTTTTCT CGTTTCGTCA GATTCAAACG 240  
 TTTCACCTC GCCAAGCCAT TTTTCTTTGT GTTTGCTTTT TATTTGACG TTTTAGACAT 300  
 AAAAAAAGA GACCTTGGCG TCTCAATGCG GGCTCATCGC ATCCATTTT TGCTGGCAA 360  
 CGTTCTACTC nAGCGGGAAG TGAAGnCGGA CTGACCAAGC 400

## (2) INFORMATION FOR SEQ ID NO: 3954:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3954:

AAACTACATA ATGAAATGC CGTTTTAATC GGTAATTA ATATGGATGA GTTTCGAATG 60  
 5 GGTGGTTCAA CAGAAACATC TTATTTCAAA AAAACAGTTA ACCCATTGTA CCATAAAGCA 120  
 GTGCCAGGTG GTTCATCAGG TGGATCTGCA GCAGCAGTTG CAGCTGGCTT AGTACCATTT 180  
 AGCTTAGGTT CAGACACAGG TGGTTCAATT AGACAACCGG CTGCATATTG TGGCGTTGTG 240  
 10 GGTATGAAC CAACATACGG TCGTGTATCT CGATTGGAT TAGTGCTTTG CATCTTCATA 300  
 GACCAAAATG GGCCATGACT CGAATGTAAA GTAATGCCAT CGTATTAGAA GCTATTCTGG 360  
 TGCAGATGnt AATGACTCTA CCAGTGCACC AGTGATGAGG 400

## (2) INFORMATION FOR SEQ ID NO: 3954:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3955:

TGGAATGGCA TTTCTCCGCT ACCCTCAGTT CATCCGCTCA CTTTCAACG TAATCGGTTT 60  
 GGTCCTCCAT TCAGTGTTAC CTGAACCTCA ACCTGACCAA GGGTAGATCA CCTGGTTTTC 120  
 30 GGTCTACGAC AAATACTAAA CGCCCTATTC AGACTCGCTT TCGCTACGGC TCCACATTTA 180  
 CTGCTTAACC TTGCATCAA TCGTAACTCG CCGGTTCAIT CTACAAAAGG CACGCCATCA 240  
 CCCATTAACG GGCTCTGACT ACTTGTAAGC ACACGGTTTC AGGTTCTATT TCACTCCCCT 300  
 35 TCCGGGGGTG CTTTTCATT TTCTCTCAA GGTATGGGTT CACTATCGGT nACTAGAGAG 360  
 TAATTAGCTT AGGnATGGT CCTCCAGAT TCGGAAGGGA 400

## (2) INFORMATION FOR SEQ ID NO: 3955:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3956:

GCTACGGGCG CATATGTTTT TATTGAAAT GGTCCGAGG ACCGGAATCG AACCGGTAGT 60

ATAAAAATGG AGCAGAAGAC GGGATTGAA CCCGCGACCC CAACCTTGGC AAGGTGTAT 180  
 TCTACGCTG AACTACTTCT GCATATGCGG GTGAAGGGAG TCGAACCCCC ACGCCGTAAG 240  
 CTTAGGATCC TAAGTCTAGT GCGTCTGCCA ATTCCGCCAC ACCCGCAAAT GGTGAGCCAT 300  
 AGAGGATTGC AACCTCTGGA CCCTCTGGAT TAAAAGTCAG ATGCTCTACC AACTGGAGCT 360  
 AATGGCTCTT TCCATGGTGC CGGGCCAGAG GACTTTGAan 400

(2) INFORMATION FOR SEQ ID NO: 3957:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 379 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3957:

CAGACATGTG TTATACGGGA AATGGGCGA ACCGCAACTA TTATACATTG ATTTACACCT 60  
 TATACATGAA GTTACTTCTC CTCGAAGCATT TGAAGGACTT AGGCTTCAAA ACAGAAAAATT 120  
 AAGACGCCCA GATTTAACAT TTGCAACACT CGATCACAAT GTTCCTACTA TTGATATATT 180  
 CAATATTAAA GATGAAATTG CAJACAAACA AATCACAACA TTACAAAAAA ACCCCATAGA 240  
 TTTTGGGGTG CATATTTTGT ATATGGGTTT TGATGAACAA GGTATTGTTC ACATGGTAGG 300  
 ACCTGAGACA GGACTTACAC AGCCTGGChA GACCATCCGT nTGTGGGTGA CTCTCACACA 360  
 GCCACACATG GnGCCTTTT 379

(2) INFORMATION FOR SEQ ID NO: 3958:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3958:

TGTTAAATA CGGTACATCT AAATTAATGT TAACTGATTI TCAAAAAGAG AATTAAATAA 60  
 ATATATTCAA GGTGAGAAC AACGCGTGAT ATTIGAAAAAT GGCCATTITG TCTAATTGAT 120  
 AGTGAATATA ATTAGAGTAA GAGGCTGGGA CATAAATCCC TAAAAAACAG CAGTAAGATA 180  
 ATTTTCAATT AGAAAAATATC TTAAGTCTGT TCTCTATTTA TACAATACTT CGTATTGAAT 240  
 GGCTTCGCTT TCCTAGGGTG CCGTCTCAGC CTCGGTCTTC GACTGGCACT GCTCCCTCAG 300



AATAAGACAT TTGnCCAAC TGA CACTACC ATTA AAAA ACT

400

(2) INFORMATION FOR SEQ ID NO: 3959:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3959:

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GAGCGCAGT	GGAATGAGG	CCAAGCGACT	GTTTATCAAA	AACACAGGTC	TCTGCTAAAC	60
CGTAAGGATG	TGTTATAGGG	GCTGACGGCT	GCCCGGTGCT	GGAAGGTAA	GAGGAGTGGT	120
TAGCTTCTGC	GACGTACrGA	ATCGAAGCCC	CAGTAAACGG	CGGCCGTAA	TATAACGGTC	180
CTAAGGTAGC	GAAATTCCTT	GTCGGGTAAG	TTCCGACCCG	CACGAAAGGC	GTAACGATTT	240
GGGCACTGTC	TCAACGAGAG	ACTCGGTGAA	AATCATAGTA	CCTGTGAAGA	TGCAGGTTAC	300
CGCGTACAG	GACGGAAAGn	CCCCGAGAG	TTTACTGTAG	CCTGATATTG	AAATnCGGCA	360
CAGTTTGATC	AGGATAGGTT	AGGAGCCTTG	GAAACGTGTG			400

(2) INFORMATION FOR SEQ ID NO: 3960:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3960:

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TGGTCCCAAA	CCAAGTGCTC	TACCAAGCTG	AGCTACTTCC	CGTATAAITA	ACGCGCCCGA	60
TAGGAGTCGA	ACCCATAACC	TCTTGATCCG	TAGTCAAACG	CTCTATCCAA	TTGAGCTACG	120
GGCGCATATG	TTTTTATTGA	AAATGGTGCC	GAGGACCGGA	ATCGAACCAG	TAGTGANThC	180
ACTCACCGCA	GATTTTAAGT	CCTGTGCGTC	TGCCAGTTCC	GCCACCCCGG	CACTATAAAA	240
ATGGAGCAGA	AGACGGGATT	CGAACCCGCG	ACCCCAACCT	TGGCAAGTTG	TTATTCTTAC	300
CGCTGGAAC	ACTTCTGGCA	TATGCGGGTT	GAAGGGGAGT	CGAACCCCCA	CGCCGTAGGC	360
TTAAGATTCC	TGAAGTCTAG	TGCGTCTGGC	CAATTTCCGG			400

(2) INFORMATION FOR SEQ ID NO: 3961:

55

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3961:

	TTTTGATACA TAATCTAAAT TTCTCAAAGC GCCAATAACA GAGGACCATC TCCTAAGGCT	60
10	AAATACTCTC TAGTGACCGA TAGTGAACCA GTACCGTGAG GGAAAGGTGA AAAGCACCCC	120
	GGAAAGGAGT GAAATAGAAC CTGAAACCGT GTGCTTACAA GTAGTCAGAG CCCGTTAATG	180
	GGTGTGGCG TGCCTTTGT AGAATGAACC GCGAGTTAC GATTGTATGC AAGGTTAAGC	240
15	AGTAAATGTG GAGCCGTAGC GAAAGCGAnG TCTGAATAGG GCGTTTAGTA TTGTGTCGTA	300
	GACCGGAAAC CAGGTGATCT ACCCTTGGTC AGGTTGAAGT TCAGGTAACA CTGAATGGAG	360
20	GACCGAACCG ACTTACGTTG AAAAGTGAGC GGATGAACCTG	400

(2) INFORMATION FOR SEQ ID NO: 3962:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 361 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3962:

	TAATAATTAC AGTATATCGG GAAGACAGGA TTCGAACCTn CGACCCCTTG GTCCCAAACC	60
	AAGTGCTCTA CCAAGCTGAG CTACTTCCCG TATAnTTAAC GCGCCCGATA GGAGTCGAAC	120
35	CCATAACCTC TTGATCCGTA GTCAAACGCT CTATCCAAT GAGCTACGGC CGCATATGTG	180
	TTTATTGAAA ATGGTGCCGA GGACCGGAAT CGAACCGGTA CGTGATCACT CACCGCAGGA	240
40	TTTTAAGTCC TGTGCGTCTG CCAGTTCCGC CACCCCGGCA CTATAnAAAT GGATCAGAAG	300
	ACGGGATTGC AACCCGCGAC CCCAACCTTG GCAAGGTTGT ATTCTACCGC TGAACTACTT	360
	C	361

45

(2) INFORMATION FOR SEQ ID NO: 3963:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 375 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3963:

AAGTGTCTTA TTTTTTAAA GTATTTCAAA GTAAAAATAC ATGTTAATAC GTAGATTAAT 120  
 GCGGAGACTC CTGAGGGAGC AGTGCCAGTC GAAGCCGTAG GCTGAGACGG CACCCTAGGA 180  
 5 AAGCGAACCA TTCAATACGA AGATnTnATn AAATAGAGAA CAGCAGTAAG ATATTTTCTA 240  
 ATTGAAAATT ATCTTACTGC TGTTTTTTAG GGATTATGT CCCAGCCTCT TACTCTAATT 300  
 10 ATATTCACTA TCAATTAGAC AAAATGGCCA TTTTCAAATA TCACGCGTTG GTTTCGTACC 360  
 TTGGAATATA TTTAT 375

(2) INFORMATION FOR SEQ ID NO: 3964:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3964:

AAAATGGCCT TGATAGACTT GCTCAATGCA GGGTGGCCAC AAACCAATGA TGCACTTACA 60  
 25 ATTTTAAATA GATTTTAAAG ACCTTGTGG TTTTGTACAA TTAATGTGAC ATGACTAGGT 120  
 CTGACAGTT TATATGCATC TTCATTACTG AGTTTTTGT TGATTTCGTT ATGATTTAAT 180  
 30 ACGCCTAATT CTTCATTG TTGAACCAAT TTTATGAAAA TGTAAGCTGT TGCTTCTGTA 240  
 TCATAAATGG CACGGTGATG TTGCGTAAAT TCTACGCCAT ATTTTITAGC CAAGAAATTC 300  
 AAACCATGTT TACCATATTC AGTATTAATC GTACGAGGAT AATTCATAAG TATCGATAAC 360  
 35 ACCATTCGTT GGATGGTCCA AACCCAGAC GTTCATATCC 400

(2) INFORMATION FOR SEQ ID NO: 3965:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 391 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3965:

ACITTTAATT TTGTCATGAT GTGCCTCCTT ACCGTAIGAT GTTATTCAA GTAAATTGCT 60  
 50 TTGCCTGATT TTGCAGACTG ATAAATCGCT TCAAGAATTT TTGTAACATC CATGCTTGT 120  
 TCCGGTTTCA CAACTGGTTC AGTATCATTT ACAACTGCAT CAATCCAAGC TTTTGCTTCT 180  
 55 TCTTCAGCTT CATCCATTC ATTACCTTCA TAAAGTCGA CGCCTTGTG TTCCAATTCA 240

TCAGCACCTG CTTTAGGTTG CTGATAATGA ACATTTTGGC CTCATCCACT TCTAAAnGAA 360  
TTAATCGCCC AAGnGGGATT CCAAAAAGGA n 391

(2) INFORMATION FOR SEQ ID NO: 3966:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 398 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3966:

CGCTATCAGG TATTGTTTCA ACAATTTTCAT TAACATATCG TGAAATATCA TTTTGAGGGA 60  
TTCTAACAGA AGTTTCTATT GGTAGTGTAG TTGGGGCATG TTATAATTTT TATACATAAG 120  
GCACCTCGTT AATTTAGTTT AGTGGTATTT ATTAAATTTAT AAGAAGGGAC CCAACACAGA 180  
AAATTCATTT TATTGAATTT TACATTTATG TGCAAGTTGG GCAAAGTGTC TTATTTTTTA 240  
AAAGTATTTT AAAGTAAAT TACATGTTAA TACGTATaTa ATGGcGAGAC TCCTGAGGGA 300  
GCAGTGCCAG TCGAAGcCAA GGCTGAGACG GCACCCcAGG AAAGCGAGcAc ATTcAATACG 360  
AAGATTGTAT AAATAGAGAA CAGCAGTAAG ATATTTTC 398

(2) INFORMATION FOR SEQ ID NO: 3967:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 374 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3967:

GCTATAGAAA AAATAAAATC ACAAGTTACG ATTACGTTAC TTGATGGGGA GTGAAAATAA 60  
TGAGAGTAAC AGAGTTATTA ACAAAGATA CAATAGCAAT GGATTTAATG GCAAAATGACA 120  
AAAATGGTGT TATTGATGAG TTAGTAAATC AATTAGACAA AGCAGGTAAA TTAAGTGATG 180  
TCGCGTCATT TAAGGAAGCG ATTACAAATC GAGAATCACA AAGTACAACT GGTATCGGCG 240  
AGGTATTGCC ATTCCACAIG CCAAAGTGGC CGCAGTTGAA GTCACCAAGCT ATTGCGTTTG 300  
GTAAACTTAA AGCAGCGGTG GATTATCAAn TTTGGnTATG CAACCAGCAC ACTTnTCTTT 360  
TGTGGTTGGC AGCG 374

(2) INFORMATION FOR SEQ ID NO: 3968:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3968:

10 ACCCGGCAC TATAAAATG GAGCAGAAGA CGGATTGGA ACCCGGCACC CCAACCTTGG 60  
 CAAGTTTGTA TTCTACGCT GAACTACTTC TGCATATGCG GGTGAAGGGA GTCGAACCCC 120  
 CACGCCGTAA nCTGAGGATC CTAAGTCTAG TGGCTCTGCC AATTCGCCCA CACCGCAA 180  
 15 TGGTAGCCA TAGAGGATTC GAACTCTGG ACCCTCTGAT TAAAGTCAG ATGCTCTACC 240  
 AACTGAGCTG AATGGCTCTT CCATGGTGCC GGCCAGAGGA CTTGAACCCC CAACCTGACT 300  
 GGATTACAAG TCAGTTGCTC TACCAATTGA GCTAAGGCCG GGCAATATGT AAGAATAAAT 360  
 20 GGTGGAGAAT GACGGGTTTC GAAACGCCGA CCCTCTGCTT 400

(2) INFORMATION FOR SEQ ID NO: 3969:

25 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3969:

GCGAGTTGGG GTGTGGGCC CACATAGAG AAATTGGATT CCAATTCTCT ACAGACAATG 60  
 35 CAAGTTGGCG GGGCCCCAAC ACAGAAGCTG ACGAAAAGTC ATTAnCAATA ATGTGCAAGT 120  
 TGGCGGGGCC CCAACACAGA AGCTGACGAA AAGTCATTAn CAATAATGTG CAAGTTGGCG 180  
 40 GGGCCCCAAC ACAGAAGCTG GCGGAAAGTC AGCTTACAAT AATGTGCAAG TTGGGGTGGG 240  
 ACAACGATAA AGTAATACTT TTTCTATAGA AATTAGTATT TCTTATGCAT GAGTTTTACT 300  
 CATGTATTCC TATTTTTAAG TACACATTAG CTGTGGCTAA TGTTTAAGAC CCACTACATA 360  
 45 ATAAATCATT AGTGGCTCTn TATCATTTCT GTCCCACTCC 400

(2) INFORMATION FOR SEQ ID NO: 3970:

50 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 419 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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GATAAGATCA GCCGAAAATG GATGGTGTTA AGAGCGTTAC TTGGTTTGGC GGTATGCTTA 60  
 TTTTAAATGG CATTGTGTAC GACACCATT AAGTTTGTAC TTGTGAGGTT ATTGCAGGGA 120  
 5 CTATTGGTGT GTGTGTGTGA TGCATCAAGT GCGTTTGGCA GTGCAGAGGC GCCACTGAKA 180  
 GATCGTGGAA AGtATTAGGA gACTGCAAAAT TCAGTCAGCG CAGGtCTCTT GTGGGGCCAT 240  
 10 TAATTGGCGG TGTACAGCT TCGATATTAG GTTTTAGTGC GTTACTGATG AGTATTGCCG 300  
 TTATTACTTT TATTGCTGT ATTTTCGGTG CATTAAAAAt ATTGAACGA CACATATGCC 360  
 AaATCACAA ACACCAATA TTAATAAAGG TnTTGCCCGT TCCAnTTnCA ATGTCTAAT 419

15 (2) INFORMATION FOR SEQ ID NO: 3971:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 381 base pairs  
 (B) TYPE: nucleic acid  
 20 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3971:

AAAC TTGGGA GACTTCAATA ACAGATTAG GTTTATCTAA AAATCAGGCA TATAATTTCT 60  
 TAATTACATC TAGTCAAAGA TGGGGCCTTA ATCAAGGGAT AAATGCAAAAT GGCTGGATGA 120  
 30 GAACTGACTT GAAAGGTTC AAGTTTACTT TTACACCAGA AGCGCCAAAA ACAATAACAG 180  
 AATTAGAAAA AAAAGTTGAA GAGATTCCAT TCAAGAAAGA ACGTAAATTT AATCGGATT 240  
 TAGCACCAAG GACGAAAAA GTAACAAGAG AAGGACAAAA AGGTGAGAAG ACAATAACGA 300  
 35 CACCAACACT AAAAAATCCA TTAAC TGGAG TAATTATTAG TAAAGGTGAA CChnAAGGAG 360  
 GGGTTTCCAn AGTCCGTAT G 381

40 (2) INFORMATION FOR SEQ ID NO: 3972:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 45 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

50 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3972:

GGGTTCAAGAA CGTCGTGAGA CAGTTCGGTC CCTATCCGTC GTGGCGGTAG GAAATTTGAG 60  
 AGGAGCTGTC CTTAGTACGA GAGGACCGGG ATGGACATAC CTCTGGTGTA CCAATTGTGC 120  
 55 TGCCAACGGC ATAGCTGGGT AGCTATGTGT GGACGGGATA AGTGCTGAAA GCATCTAAGC 180

GAnGTTAATA GGTTTCGAGGT GGAAGCATGG TGACATGTGG AGCTGACGAA TACTAATCGn 300  
 TCGAnGACTT AATCAAAATA AATGTTTTGC GACCAAAATCA CTTTACTTAC TATCTAGTTT 360  
 GAATGATAAA TACATCATAT GCTGGnGCCA TACCAAGGGG 400

(2) INFORMATION FOR SEQ ID NO: 3973:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 400 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3973:

TCTTTTAATT ACGTAATGGC TTACCAGTTT TTAACATATG TGCAATTCCTT TCATATGATT 60  
 TTTTAGATTT TAGTAAGTCA ATAAAGCCAA TTTTCICCAA CGATTGAATG TAACGTTGAT 120  
 TGATAAATGT ATTTCTTGGT AAATCACCAC CCGCTAAAT TGTGGCGATA TTTAAGGCAA 180  
 TATGATAATC ATGGTCGCTA ATAAATGAC CCGCTCTTTG CGCATCTAAT TGTCTTGGGA 240  
 TCAATGCTTT GAAGTCTTCA CCTAAAGCGA TATATTGATG TCTAGGATTC GGAATATAGT 300  
 TTGTTTCTGC TTCATATTTC GCACTGTGTG GCGCAACTTC GACACGnTGG TGCTCGGATT 360  
 nGAAAAATAAA CCGGAnCCnG GGATCCACGG GAAATAACCC 400

(2) INFORMATION FOR SEQ ID NO: 3974:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 400 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3974:

TGCGATGTC ACCTTGTTTA AAATCAAGST TTGTAATGTT TCCTTGTGTC ACGATAATAG 60  
 GCGTAATATC ACTCTTTGCA TGATTGCGGA TGTAGTCTAA ATCAAAAGTTG ATTAATAAAT 120  
 CACCTTGTTT AACTTCTTGA CCTTCCTCAA CATGTAAAGT AAAGCCTTCT CCGTTTAATT 180  
 TAACAGTGTC TAAACCGATG TGGATTAAATA GTTCTAAACC ACTATCTGAA TACAAGACCA 240  
 ATTGCATGTT TTGTTGGGAA AATCAATTGT TACTTTACCG TTGAAATGTT GCACGAAACT 300  
 TCACCTTGTT AnGTTTTTGG ATAGCGATAC CGTCACCCCA TCATTTTTTT TTCGCTGAAA 360  
 CACTTGGATC AnGGCACTTC TGAATAAATG GTGGTTAACT 400

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 372 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3975:

10	CCTTTGCGCAGC GCCTCCGTTA CCTTTTAGGA GGGCAGCGCC CCAGTCAAAC TGCCCGCCTG	60
	ACACTGTCTC CCACCACGAT AAGnCGGGn GTTTAGAAAG CCAACACAGC TAGGGTAGTA	120
15	TCCCACCAGC GCCTCCAGCT AAGCTAGCGC TCACGTTTCA AAGGCTCCTA CCTATCCTGT	180
	ACAAGCTGTG CCGAATTTC AATACAGGCT ACAGTAAAGC TCCACGGGGT CTTTCCGTCC	240
	TGTGCGGGGT AACCTGACG TTCACAGGTA CTATGATTTC ACCGAGTCTC TCGTTGAGAC	300
20	AGTGCCCAAA TCGTTAACGC CTTTCGTGCG GGTCCGGAAC TACCCGACAA GGAATTTCCG	360
	TAACTTAGGA CC	372

(2) INFORMATION FOR SEQ ID NO: 3976:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 395 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3976:

35	AGGGAATCGA ATTTTCTTTC TCTTCTnCG GGTACTAAGA TGTTTCAGTT CTCGGGGTGT	60
	GCCTTCGAT ATGCTATGTA TTCACATATC GATAACATGA CATAACTCAT GCTGGGTTTC	120
	CCATTCGGA AATCTCTGGA TCAAAGCTTA CTTACAGCTC CCCAAAGCAT ATCGTCGTTA	180
40	GTAACGTCCT TCATCGGCTT CTAGTGCCAA GGCAATCCACC GTGCGCCCTT AAATAACTTA	240
	ATCTATGTTT CCACCATTTT TATAAGTCAA ACGCTCACAT ACGGCTTCGT TTTCATTATT	300
45	TTAAAGTCA TTTACATAAG TAAACTCTGC TTTAAATGAT TTAACTCATT GTCTGCTAAA	360
	ACGGTTTnTT TTATGAAAG GTTTGAAACG GGTn	395

(2) INFORMATION FOR SEQ ID NO: 3977:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear



## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3977:

5 TTGGTCCCAA ACCAAGTGCT CTACCAAGCT GAGCTACTTC CCGTATAAAT AACGCGCCCG 60  
 ATAGAGTCGA ACCCATAAAC TCTGATCCG TAGTCAAACG CTCTATCCAA TTGAGCTACG 120  
 GGCGCATATG TTTTATTGA AAATGGTGCC GAGGACCGGA ATCGAACC GG TAGTnnTTCA 180  
 10 CTCACGAGA TTTTAAGTCC TGTGCGTCTG CCAGTTCGGC CACCCCGGCA CTATAAAAAAT 240  
 GGAGCAGAAG ACGGATTTCG AACCCGCGAC CCCAACCTTG GCAAGTTGTT ATTCTACCGC 300  
 TGAACACTCT CTGCATATGC GGGTGAAGGG AGTCGAACCC CCACGCCGTA GGCTTAGATC 360  
 15 CTTAAGTCTA AGTGCCTCTG GCCAATTTCG GCCAnACCCG 400

## (2) INFORMATION FOR SEQ ID NO: 3978:

## (i) SEQUENCE CHARACTERISTICS:

20 (A) LENGTH: 387 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3978:

AAGTGGTTAA ATATTATAGA AAACATCAAA GGATGTTAAG AAATACAATT TATTACCCAG 60  
 30 CATTTAATAA TGGTGTCTATA GAAGGAATTA ATAATAAGAT AAAATTAACT AAGTGAATTT 120  
 CTTTGGTTA CAGAAATTTT AACAACTTTA AAGCACGTAT AATGATGATT TTCAGCTTGT 180  
 ACAAAGGAGA AAAAAAGAAG ACAACCAAGC CCAATAATGG ACTGGCGGCC TAATAATAAA 240  
 35 AGCTCTAAAA GTTGATTTTT AAAAATAGTT CTTTAAATTA TATACCCACC ACATTTGGTG 300  
 GAGGAACCTA AAAAAAGCA CTTCCCAAAA ATGGGAAAGT GCAGTnAGTG GAGCCATAGA 360  
 40 GGATTCCGAA CCTCGGACCC TcnGAnT 387

## (2) INFORMATION FOR SEQ ID NO: 3979:

## (i) SEQUENCE CHARACTERISTICS:

45 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3979:

50 TTGAGCAGAA GACGGGATTC GAACCCGCGA CCCCAACCTT GGCAAGGTG TATTCTACCG 60  
 CTGAACACT TCTGCATATG CGGGTGAAGG GAGTCGAACC CCCACGCCGT AAnTTAGCAT 120

CGAACCTCTG GACCTCTGA TTAAAAGTCA GATGCTCTAC CAACTGAGCT AATGGCTCTT 240  
 CCATGGTGCC GGCCAGAGGA CTTGAAACCC CAACCTACTG ATTACAAGTT CAGTTGCTCT 300  
 5 ACCAATTGAG CTAGGCCGgn CAATATGTAA GAATAAATGG TGGAGAATGA CGGGTTTCGA 360  
 ACCGCCGAAC CCTCTGCTTG TnAAGGGCAG ATGGCTCnTC 400

(2) INFORMATION FOR SEQ ID NO: 3980:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3980:

20 TTACCACGTA TTTAGSTTTC TTGGTGGCT CTAGATTGT CCCTATTGTC ACAGCATTTG 60  
 CCGCAATCTT TTTAGGTGTA TTGATGTTTT TCATTGGCC AAGCATACAA GCCGCGATTT 120  
 ATCATGTTGG TGGATTGTGA ACGAAAACAG GTGCCATCGG TACTTTTGT TATGGCTTCA 180  
 25 TCTTAAGATT GTTAGGTCCA CTCGTTTAC ACCATATTTT TTACTTACCG TTTTGGCAGA 240  
 CGGCACTTGG TGGACTTTA GAAGTCAAAG GGCACCTAGT TCAAGGTACG CAGAACATCT 300  
 30 TCTTTGCTCA ACTTGGTGAT CCAGATGTGA CGAnTATTAT TCCAGGTGTG TCACGCTTTA 360  
 nGTGAGCCGT TTAATACGA GGATGTTGCG CTAnGTGGTG 400

(2) INFORMATION FOR SEQ ID NO: 3981:

35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3981:

CGACATACGC TGATAAATTA GTTATTAAC GTAATGGTAA CGTTGTGACG ACATTTCAC 60  
 45 GTCGCAATAA TACGAGTCCA TGGGTGAAAG AAGCATCTGC AGCAACTGTA GCAGGTATTG 120  
 CTGGAACATA TAATGTTATT ACTGTTGCAG CAGGTACTTT CAACCTGCT GATACAATTC 180  
 50 AAGTTGTTGC AACGCAAGGG AAGCGGAGAG ACAGTGTAGT GGATGGAGCA ACGTATAGTT 240  
 GGATTTTACA GTTGTGCAC CACAACGAA CCAAGCGACT GACTGAAGAT TTGSCAAAAT 300  
 GGnCATATTG ATATCAGCC TAATGAnTCC ATTCAGACA TTTAATTAAT CCAACTCAAG 360

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## (2) INFORMATION FOR SEQ ID NO: 3982:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3982:

TTTAGCTGAA	GCTTTAACTT	ATACAAGTGA	ACATCAAATG	AACTTTATAG	ATCCATTCAA	50
TAATGTTTAT	ACAATTTCTG	GACAAGGTAC	GCTTGCTAAA	GAAATGCTAG	AACAAGCAA	120
GTCTGACAAT	GTTAACTTTG	ATTATCTATT	TGCCGCAATT	GGTGTGGCG	GTTTAAATTC	180
AGGTATTAGT	ACTTACTTTA	AAACCTATTC	ACCTACCACG	AAAATTATAG	GTGTTGAACC	240
TTCAAGTGCAA	GTAGTATGTA	TGAATCTGTT	GTGTGAAATA	ATCAGGTAGT	CACATTGCCT	300
AATATCGATA	AATTTGTGGG	ACGGTGCATC	TGTAGCTAGA	GTTGGCGATA	TTACATTGGA	360
AATTGCCAAA	GAAGAGTAGA	GGATTACGTT	CCAGTAGAGn			400

## (2) INFORMATION FOR SEQ ID NO: 3983:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 390 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3983:

CCACCATTAT	TTGTACATTG	AAAACCTAGT	AAGTAAGTAA	AATATAGATT	TTACCAAGCA	60
AAACCGAGTG	AATAAAGAGT	TTTAAATAAG	CTTGAATTCA	TAAGAAATAA	TCGCTAGTGT	120
TCGAAAGACG	CGACAAGATT	AATAACGCGT	TTAAATCTTT	TTATAAAGA	AAACGTTTAG	180
CAGACATGTA	GTTAAATTAT	TTTAAAGCAG	AGTTTACTTA	TGTAAATGAG	CATTTAAAAAT	240
AATGAAAACG	AGGCCGTATG	TGGAGCGTTT	GACTTATATA	AAATGGTGGG	AAACATAGAT	300
TCAAGTTTAT	GAAGGGCGCA	CGGTGGGATG	CCTTGGGCAC	TAGnAAGCCG	nTGAAGGAC	360
GTTACTAACG	ACGATATGCC	TTGGGGGAGC				390

## (2) INFORMATION FOR SEQ ID NO: 3984:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3984:

GGGCTCTAAC ATATTCTTAA ATTGATCAAA TAGTCTTGC CTGTATCTG CAAATGTTTT 60  
 GTAGTCTGCA TGCAATGTGA GTGCTTGATG AATTTTGACC ACAAATTCAA ATGTATCAGG 120  
 CGTTTCTTTT ATCCATTCA ATATATTCTT TTCGGTGTG ATCGCATAGT ATGTCGCATC 180  
 TAATTGACA ACCGGAAAT GTCCAGCATA TGTTTAAGT TTATCGGTTT GCGTCTCTAA 240  
 ATCTTCATAT AATGAATAGT GATCACCACA ACCTGTTAAT CCGATGTTTT ATCATATATA 300  
 TCACCAATGT CATCATACCA TATAACTTTT ATCATnATCA TTTCAGCGAA CTITAGGITT 360  
 GnAGGTTTTT TGGCCTGGAT TAAAnATCTT TCGGCGGAT 400

## (2) INFORMATION FOR SEQ ID NO: 3985:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3985:

GCATTTCGTT ATATCTTTAA AAAAGATTTT GAAGATATTG AAAGAAAAAC TAAAGAAATT 60  
 ATTTCTGATA TTGAAAGTAA AAATAACTAA TAACATTAG AGGCTGGGAC ATAAATCCCT 120  
 AAAAAAnCAG AGTAAGATAA TTTTCAATTA GAAAAATATCT TACTGCTGTT CTCTATTTAT 180  
 ACAATACTTC GTATTGAAAT GGCTTCGCTT TCCTAGGGTG CCGTCTCAGC CTGGTCTTC 240  
 GACTGGCACT GCTCCCTCAG GAGTCTCGCC ATTGAATACT ACGTATTAAC ATGtnAATTT 300  
 TACTTTGGAA ATACTTTTTAA AAAATAAGAC ACTTTGCCCA ACTTGGCACA TAAATGTTAA 360  
 AATnCAATGA AATGAATTTT CTGTGTTGGG TCCCTnCTA 400

## (2) INFORMATION FOR SEQ ID NO: 3986:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3986:

TTCTGTCAAA GTCATCTAGG TCACATTATT CTATTGGGA TTCTTAGTGC TGTTCTTATT 60

ATGACAAATAC AAAACGTAAA AAAGTCGCAG TGATCGGTAG TATTTTAGTA TTTATCATT 180  
 5 GTATTCCAGC AACCTTATCT TTGGTATCT TAAAGATGT AAGATTCGGT GCGGGAACGA 240  
 TTTTGTATAA TATGGATTTC ATCGTTTCGA ATGTATTGAT GCCATTAGGC GCATTAGGTA 300  
 CTACGCTTGT CGTAGGnCAA TTATTAGnTA AAAAATTATT ACAnCAATAT TTTGTAAAG 360  
 10 AnCGATTTAG GATTATTTCAG TGGTTGGTAT TACTTAATTA 400

(2) INFORMATION FOR SEQ ID NO: 3987:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3987:

GGATTGAAAC CCCCGCAGC CGTTAAGCCC CTGTCGGTTT TCAAGACCGA TCCCTTCAGC 60  
 CGGACTTGGG TATTCCTCCA AAATTATATG GACCTTGCAG GACTCGAACC TGCAGCCGAA 120  
 25 CGGTTATGAG CGGTAGCTC TAACCAACTG AGCTAAAGTT CCTAAATATA ATTTTACAAC 180  
 TAATAAATAG TGGCGGTGSA GGGGATCGAA CCCCCGACCT CACGGGTATG AACCGTACGC 240  
 30 TCTAGCCAGC TGAGCTACAC CGCCTTATAT AGTTTGTAAA TAATATGGTG GGGACTAnCG 300  
 GGATCGGAAC CGCTGGACCT CCTGCGTGGC AAAGCAGGCC GCTCTCCAG CTGAGACTAA 360  
 GnCCCCCATA ATAATnACAG TATATnGGG AAGACAGGAT 400

(2) INFORMATION FOR SEQ ID NO: 3988:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3988:

CAGCTGATAA ACAAGTTGAT CTGTCCTCGA TTTGTGGGT AACGGTTGA TTAATGnAAA 60  
 ATGTTGCGCG AAGGATTTCAT AATCCGAGAG GTCTAATTCA ACGTATCATT AATCAAGATG 120  
 50 CGCCTATTTA TCAATCTGAA ACAAAATTATC ATTGGAAGA TCGGGTAAAG TCTAAAAATG 180  
 GTATTCAAAT GGTGTATCAA CATTTAATGA ACGGTGTATC GTTTATGGnT CCTTTTATCG 240  
 TAGTTGGTGG ACTCCTTATC GCCATCGCGC TGACTCCTAG GCGGTGAACG ACCATCCAAA 300

CCITTTAAATT AATGGTCCCA TACCAGnCGG GATAAACGCT

400

(2) INFORMATION FOR SEQ ID NO: 3989:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 363 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3989:

15	CCAGAGATT CCGAATGGG GAAACCCAGC CATGAGTTAT GTCATGTTAT CGATATGTGA	60
	ATACATAGCA TATCAGAAGG CACACCCGGA GAACTGAAAC ATCTTAGTAC CCGGAGAAGA	120
	GAAAGAAAAA TCGATTCCCT TAGTAGCGGC GAGCAAAACG GAGAGAGCCCA AACCAACAAG	180
20	CTTGCTTnGn GGTnGTAGG ACACTCTATA CGGATTACAA AGGACGACAT TAGACGAATC	240
	ATCTGGAAGG ATGAATCAAA GAAGTAATA ATCTGTAGT CGAAAAATGTT GTCTCTCTTG	300
	AGTGGATCCT GAGTACGAGC GAGCACGTGG AAATTCGTC GGAATCTGGG AGGACCATCT	360
25	CCT	363

(2) INFORMATION FOR SEQ ID NO: 3990:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3990:

40	TTTCCAAGAA CATGAGCCTG TACAGTTAAC ACCATGnTG nTTCCTACTT CTTTATCGTG	60
	GCTCCAACGT TCTCTGTACA TTTTTCCTCA TTCTCTACTT TTACTTTCTA GGATCGACCA	120
	ATTCCCATTA AATTTTCTG TTGGCTTAAA GAAATTCAAT CCAAATTTTC CCATATTTAT	180
45	ATCTCTCTAC GTATAAAAAAT ACGATGTGTA GATGTCGTGT TTTTAAATAC TTTAAATATC	240
	CCAAGACTAT TGCTTTAATT AGATTGTACA TTTTTCACA AACATAAAAT ATTAGGGAAT	300
	CACCTAATTA CTTAAGGnAT TCCCTATCAA TAACGGGATT TCATTGAAAT AATACACAAT	360
50	CAGTAnGGTC AGCCTAATGC CAGGCTAAAT CGTTCAAATT	400

(2) INFORMATION FOR SEQ ID NO: 3991:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3991:

AAAGTGGTTA AATATTATAG AAAACATCAA AGGATGTTAA GAAATACAAT TTATTACCCA	60
GCATTTAATA ATGGTGCTAT AGAAGGAATT AATAATAAGA TAAATTAAT CAAGTGAATT	120
TCTTTTGGTT ACAGAAATTT CAACAACCTT AAAGCAnGTA TAATGATGAT TTTCAGCTTG	180
TACAAGGAG AAAAAAAGAA GACAACCAAG CCCAATAATG GACTGGCCGC CTAATAATnn	240
GAGCTCTAAA AGTGTGATTT TAAAAATAGT TCTTTAAATT ATATACCCAC CACATTGGGT	300
GGAGAACCTA AAAAAAAGCA CTTCACAAAA ATGGAAAGTG CAAGTAGTGA GCCATAGAGG	360
ATTGCAACCT CTGACCCTCT GATTAAGT CAGATGCTCT	400

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(2) INFORMATION FOR SEQ ID NO: 3992:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3992:

AGTGTATGGT TATCAAAGAT TTGATACGAC GGTCAATTAT ATTACGGTTA TTGTATTAGT	60
CATTATTGTC CAAGTGATTC AAACGCTAGG GAATGTTCTA GCTAGATTCA TACGTnGACA	120
TTAATGATAT ATAGTGAAGA TTTTGAAAGG AATTGATAGA ATGAAAAGAT TGATTGGGTT	180
AGTTATCGTA GCACTTGAT TAATTAGCAG CGTGTGGTGG TAACAATGAT AAAAAAGTAA	240
CAATTGGTGT CGCATCAAAAT GACACTAAGG CTGGGGGAGA AGGTTAAAAG AATTAGCTAA	300
AAAAAGATGG ATnTTGATGT GGGAGATTAA GCACTTCCTC nGGATTACAA TTTACCGGAT	360
TAAAGCCTTn AAATGGATGG TGATATTGAT AATGAATGCC	400

45

(2) INFORMATION FOR SEQ ID NO: 3993:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 383 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3993:

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TTATCAGAAG AACAAATCGA CATTTTACTG AATCATCCAT TAATCGATGA AGAAGTAGCC 120  
 AATAGTTTAA TTGAAAATGT CATCGCGCAA GGnGCATTAC CCGTTGGATT ATTACCGAAT 180  
 ATCATTTGGG ACGATAAGGC ATATGTTGTA CCTATGATGG TGAAGAGGCC TTCAGTTGTC 240  
 GCTGCAGCTA GTTATGSGTC AAAGCTAGTG AATCAGACTG GCGGATTAA AACGGTATCT 300  
 TCTGAACGTA TTAATGATAGG TCAAATCGTC TTGATGGCG TTGACGATAC TGA AAAATnT 360  
 CCGCCGGCAT TGAGAGCCTT AGA 383

(2) INFORMATION FOR SEQ ID NO: 3994:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 366 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3994:

GGTACTATGA TTTCACGAG TCTCTCGITG AGACAGTGCC CAAATCGTTA CGCCTTTCGT 60  
 CGCGGTCGGA ACTTACCGA CAAGGAATTT CGCTACCTTA GGACCGTTAT AGTTACGGCC 120  
 GCCITTAGTG GGGCTTCGAT TCGTAGCTTC GCAGnnAAAC ChACTCCTCT TAACCTTCCA 180  
 GCACCGGGCA GGCATCACCC TGATACATCA CCTTACGGTT TAGCAGAGAC CTGTGTTTTT 240  
 GATAAACAGT CGCTTGGGCC TAITCACTGC GGCCTTCTG GGCGTAAACC CTGAAAGAGC 300  
 ACCCTTCTC CGGAATTACG GGGTCATTG CCGATTCCTT AACGAGATTC GTCGCTCAC 360  
 CTTAGA 366

(2) INFORMATION FOR SEQ ID NO: 3995:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 359 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3995:

AGATATTTTA CATGTGAATC AAGTAGGTAT TCAATGATAAT TTCTTTGAAT TAGGTGGCCA 60  
 TTCAATTA AAA GCAACGTTAT GntGAATCGG ATAGAGGCAT TCACTGGGAA ACGATTACAA 120  
 ATTGGTGATT TAITACAAAA GCCAACTGTA TTTGAACTAG CACAAGCGAT TGCTAAGGTT 180  
 CAAGAACAAA ACTATGAAGT GATCCAGAA ACTATAGTTA AAGATGATTA TGTCCTGAGC 240

55



GTACCTTTT TATGCGGTT ATnCATCAGA ACTTAATGTA GCTCAnTGCG ACAAGCATG 359

(2) INFORMATION FOR SEQ ID NO: 3996:

- 5 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3996:

15 CAATTATTGG TATTCAACTT AAAGATCATG ATGATTTAAT ACAACTCAA CAACGTTAA 60  
 ATCATTTCGA TCCTTCCAAT ATTTATATTA ATGAAATAA GATGTTATAT TCATTGTTAA 120  
 TTAAACACAT AGTAAGAAAA ACAGTCATAA ATTGATTCTT AATTGAAATC ATCTTATGAC 180  
 20 TGCTTTTAT TATACTTTAC ATTTCTCGTT TCGTCAGATT CAAACGTTT CACTTCGCCA 240  
 AGCCATCTTT CTGTGTGTTT GCCTTTATTT TGACGTTTAA GACATAAAAA AAGAGACCTT 300  
 GCGGTCTCAA AIGCGGCTCA TCGCATCCAC TTTTGCCTG GGCAACGTTT TACTCTAGGC 360  
 25 GGAAAnTAAG TGGGACTTAC CATCGACGGn TAAGGGGCTT 400

(2) INFORMATION FOR SEQ ID NO: 3997:

- 30 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 358 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3997:

GATACTACCC TAGCTGTGTT GGCTTTCTAA CCCGCACCAC TTATCGTGGT GGGAGACAGT 60  
 40 GTCAncGGGG CAGTTTGACT GGGGCGGTCTG CTCCTAAAAG GTAACGGAGG CGCTCAAAGG 120  
 TTCCTCAGA TGGTTGGAAA TCATTCATAG AGTGTAAGG CATAGGGAG CTTGACTGCG 180  
 AGACCTACAA GTCGAGCAGG GTCGAAAnCG GACTTAGTGA TCCGGTGGTT CCGCATTGAA 240  
 45 GGGCCATGCG TCAACGGATA AAAGCTACCC CGGGGATAAC AGGCTTATCT CCCCAAGAG 300  
 TTCACAGCAC GGGGAGGTTT GGCACCTCGA TGTCGnCTCA TCGCATCCTG GGGCTGTA 358

(2) INFORMATION FOR SEQ ID NO: 3998:

- 50 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3998:

5 TAGGAGGAAT TTATATGACA TTGTAAAAAG AAACGGTCTT AAAACATTA TTTCTGGAAG 60  
 ATGTACTTAG TATTGCTAAA GGTTTAACAG ACGGTGAAGT CGAATTTTTA CAACAAGTAG 120  
 ATTCATTGCT AGAAAGTAAG TACCGTGAAA ATATTAAATCA ACATTGGATA GACGCTACTG 180  
 10 TACCCGAGGA CTATTTTAAA GATCTGGGAG AATTAAATTA TTTTAACAAT CCATTACTTT 240  
 ACAAGGATCG TCCAAACGCC AAAATGCCTA GTCAATCTATT TCAGTTTTTC ATGTCITACC 300  
 TACTCGCGCG ATTTGATATT TCCTTAGCTA CCTACTCGG TGTTACCAA GGTTAGGGCA 360  
 15 TAACACTTTC TATTTGGGAG GTAGCAAAGA CAAATTGCGA 400

(2) INFORMATION FOR SEQ ID NO: 3999:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 398 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3999:

CGCCCCCTTAG TGCTGCACTA ACGCATTAAAG CACTCCGCT GGGGAGTACG ACCGCAAGTG 60  
 30 AAACTCAAAG GAATTGACGG GGACCCGCAC AAGnGTGGAG CATGTGGTTT AATTGAGGC 120  
 AACGGTAGAA CCTTACCAA TCTTGACATC CTTTGACAAC TCTAGAGATA GAGCTTTCCC 180  
 CTTCCGGGAC CAAAGTGACA GGTGTGTCAT GGTGTGCTC AGCTCGTGTC GTGAGATGTT 240  
 35 GGGTAAAGTC CGCAACGAG CGCAACCTT AAGCTTAGTT GCCATCATT AGTTGGGCAC 300  
 TCTAAGTTGA CTGCCGTGA CAAACCCAGG AAGGTTGGGG ATGACGTCAA ATCATCATGC 360  
 40 CCCTTATGGn TTGGGTTAC ACAAGTGGTT ACAATGGG 398

(2) INFORMATION FOR SEQ ID NO: 4000:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 377 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4000:

TGTTCTTGCA ACGCTATTTA GTATCAGGTT TAACAACAGG TGCACAAA GGTAGTTTG 60

GACGTTATGA TGACGATTAA AGTTGGAATC ATTGGGTGTG GTGGTATTGC GAATGGCAAG 180  
 CACATGCCAA GTTTACAAAA AGTTGAAAAT GTTGAAATGA TCGCATTTTG TGACGTAGAC 240  
 5 ATTTCGAAAG CAGCGAGTGC GGCAGAAGCA TACGGAAC TGCAATGsCAA aGtTTATGAT 300  
 GATTACmAG CATTGTtAAA AGATGACACG ATTGATGITA TCCATGTTTT GTACCCCCAA 360  
 TGGACCCCGC ATTGTGG 377

## (2) INFORMATION FOR SEQ ID NO: 4001:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 387 base pairs  
 (B) TYPE: nucleic acid  
 15 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4001:  
 TCGGGTTCTC AAATCATCGA ACATAACAAA AGAAGCTAAG CAACATGTAG GCCGTGTGCA 60  
 CTTAACTTCT TGTTTTTCCG ATGACAGCTT CTATTAGAG AATGTCATGA TTATTTTATA 120  
 25 TTCACCTCAA TGTTATCAAT ATTAGTGCCA TCTATGACAT CTGCCATGCG ATTTTCTTGT 180  
 AATTTTTTGT GCAATTCAAA CGTGACTITT CCACCGTTTT TCATTTTAAAT AACAAATTTA 240  
 CCTGAACCAA CGTTACCGTA CAGATTATTT TTTTCAATAA GTGTTTTCTC AAITTTAAAA 300  
 30 CAAGTTCTTT CAAGGAAATC TGTTCTTTAG TAATCTTGAA TTCTGAAACA TCATGGGnGA 360  
 TTGTACCGTA TrATCTTnCC TAGTAAT 387

## (2) INFORMATION FOR SEQ ID NO: 4002:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 40 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4002:  
 45 CTATTACGAT TGCTGCGAAA GAAGGTATTA AAAATATACA AATAGGCATG GCTCACCGTG 60  
 GACGTTTAAA CGTTTTAACG CATGTCTTAG AAAAACCGTA CGAAATGATG ATTTCAGAAT 120  
 TTATGCATAC AGATCCAATG AAATCTTAC CTGAAGATGG TAGCTTGCAG TTAATGCTG 180  
 50 GATGGACTGG TGATGTGAAA TATCACTTGG TGGGCATTAA AACTACTGAT TCATACGGTA 240  
 CAATGCAGCG TATTGCACTG GCTAACAAATC CAAGTCACTT GGAAATTGTT GCACCTGTTG 300

55

TCCATCATAA AnGCAATGnC CATTGTTGAT ACATGGCGAT

400

(2) INFORMATION FOR SEQ ID NO: 4003:

- 5 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4003:

15 AGAAATATAT GCATTTCCGA TATCATGGTA AAGAGAATGG ATTAAGCGGT AAATCACGTG 60  
 ATGAAGTGGC AGCGAAATGA AACAAAATT AGATGTCATG CGAGACGATA ATCAAAGGGA 120  
 CGACAGGTGA TGGGGTTGAA AGTGTAACGn GCTACACTGG TCATGATGCT GCTAAACTAC 180  
 20 GTGATTATAA TGAACACAT CATGCTTTGT CTGGATATGA AATGATTGAC GCACAAAGG 240  
 TCCATTGCA ACAAATGAAG TCAATGCTGC GATGGGTATT ATTGTGCAC GCCAACAGCT 300  
 GGTTCCTGG GTACCATTCC CGGTGCACTT TTAAATTAG GAAAAACAC ATGATTTAAC 360  
 25 AGAAGAGCAA ATGATTGAT TTCTTATTCA CTTCAGCATT 400

(2) INFORMATION FOR SEQ ID NO: 4004:

- 30 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4004:

40 TGAAATAGAA CTGAAACCG TGTGCTTACA AGTAGTCAGA GCCCGTTAAT GCGTGATGGC 60  
 GTGCCITTTG TAGAATGAAC CGGCGAGTTA CGATTGATG CAAGGTAAAG CAGTAAATGT 120  
 GGAGCCGTAG CGAAAGCGAG TCTGAATAGG GCGTTAGTA TTTGGTCGTA GACCGAAACC 180  
 AGGTGATCTA CCCTTGTCA GGTGAAGTT CAGGTAACAC TGAATGGAGG ACCGAACCGA 240  
 45 CTTACGTGTA AAAAGTGAGC GGATGAACTG AGGGTAGCGG AGAAATTCCT ATCAGCTGG 300  
 AGGATAHTGG TTCTCTCCGA ATAGTTTAGG GCTAGCCTCA AGTGTGATTA TTGAGGTAGA 360  
 nACTGTTTGA CGAGGGGCCC TCTCGGGTAC CGAATTCAGG 400

50

(2) INFORMATION FOR SEQ ID NO: 4005:

- 55 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 415 base pairs

(C) STRANDEDNESS: double

(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4005:

	ATACTAAGGC GTTATTAGAC GaTTAGACAA TGGTGTGATT AAAGGTGCAG CACTTGATAC	60
10	GTATGAANTTT GAACGCAAAAC TTTTCCCAAG TGATCAAAGG GGCAAAACAC TGAACGATCC	120
	ATTGTTAGAA TCGTTGATTG ACAGGGAAGA TGTCATATTA ACACCACATA TTGCGTTTTA	180
	TACTGAAGCT GCAGTAAAAA ATCTAATTGT CGATGCATTA GATGCAACAT TAGATGTATT	240
15	GGCAGACTGG AGATACTAGG TTACGAGTAA ATTAATAATC GAACTGATGA GATAATTTGG	300
	ATTGTTGGGG ATTCTGCATC CAGTTCGATT TTTTAAATTT GGTGTTGGAT GACGTTGnAA	360
20	TGTTGCCTAA TTTAAACGAC ATCGTAAACC nTGATCCTC CAATGGCGTC CTnTnC	415

(2) INFORMATION FOR SEQ ID NO: 4006:

	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 444 base pairs
25	(B) TYPE: nucleic acid
	(C) STRANDEDNESS: double
	(D) TOPOLOGY: linear

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4006:

	CTAACAGAAG CTAGTATAGG AAATCGGTAC TCGTTAAGGC TGATCTGTGA TGGGGAGAAG	60
35	ACATTGTGTC TTCAGTTCGT TGATTTCACA CTGCCGAGAA AAGCCTCTAG ATAGAAAATA	120
	GGTGCCCCGA CCGCAAAACG ACACAGGTAG TCAAGATGAG AATTCTAAGG TGAGOGAGCG	180
	AACTCTCGTT AAGGAACTCG GCAAAATGAC CCCGTAACCT CGGAGAGAAG GGTGCTCTTT	240
40	AGGGTTAACG CCCAGAAGAG CCGCAGTGAA TAGGCCCAAG CGACTGTTTA TCAAAAAACAC	300
	AGGTCTCTGC TAAACCCGTA AGTGATGTAT AGGGGCTGAC GCTGCCCGGT GCTGGAAAGT	360
	TAAGAGAGST GGGTTACTTC TTGCGACTTA nCGAAATCGA GnCCCCAGTA AACGGCGGGC	420
45	CGTAACTATA ACnGTCTCTAA GGTA	444

(2) INFORMATION FOR SEQ ID NO: 4007:

	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 400 base pairs
50	(B) TYPE: nucleic acid
	(C) STRANDEDNESS: double
	(D) TOPOLOGY: linear

55

TTTGAAGCTCT ATCAAAGCAT CAGCAATCAA AACATACGTA TCTTTACAAC AGTAATCATG 60  
 5 CATTTCTATGA TGCTTCTAAC TGAATTAAAG CATCGAACAA TCGGAAGCAT ATTTCTAAAT 120  
 TATTTTATCA TTATAGTCTT AACATAACA TGCCTAATA TATTACTAAC CTATTAAAAT 180  
 AAACCACGCA CATCTAAGTG ATATACGACA ATCAGACAA TAATAATTGC TTTAGAAAAGT 240  
 10 CGTGCCGAAC TGAACCTTAC AAGTCTAGTT CGAACACACA CTGATGTGAG TGGTTTCTT 300  
 TATTTTAAAC ATGAACAATC AGATAAGTTA CTAGCATTAG CAAATATTAT TAAATCAAGG 360  
 GCTTCGnTTC ATAAATTTAA AACATGTAA ATTAGACGTG 400

15 (2) INFORMATION FOR SEQ ID NO: 4008:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 20 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4008:

TATACTTGTT TTTACAAACC ACAAAAAGCT CTAACATTA GTTTAAACCA ATGCTTAGAG 60  
 CTTTCTAATT ATTTTATGCT TTAAAAGATA CTGTGTTATC TACGATGACC TTACCGTCTT 120  
 30 TAATAACTTT TTCTGCGTGA TTGATACCAA AATGATATGG AATATATTCA TGATTGTGGT 180  
 CATCCCAAAAT TACTAAATTA GCCTTATCAC CTGTGTTAAT TGTACCCGCG TTAATGTCTA 240  
 TTGCTTTAGA GCCATTGACC GTAACAGCAT TCCAAACTTC ATTAGGTGAT AGCTTTAATT 300  
 35 TCAAGGCTGC AATCGCCATA ACAAGTTGTA AGTTGTTTGT GGACACTACT ACCAGGGTTA 360  
 TAATCAGTTG GCTAATGCCA TCGGCACCGG TTAATGGTCC 400

40 (2) INFORMATION FOR SEQ ID NO: 4009:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 45 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4009:

50 ACAAAACATTG AAATTAGAGG TATATAAAAA ATGCTTCTGC AATAGATGCA ATAAACATGC 60  
 AATACAATAT GGAGGCGAAG TAAATGAAAA GTATTACGTT TGAAGAACAT TATGTCAATTG 120  
 55 AAGATATTCA AAAAGAAACG ATGAATGCGA TATCAGCAGA TCCTAAAGGT GTACCGATGA 180

ATCATGATGA ACGTATCCAA TTTATGAATA ATCAAGACGT TC AAAATTCAA GTCTTATCTT 300  
 ATGGAAATGG TTCTGCTTCA AATTGGTTG GTCAGAAAGC CATTGAATTA TGTC AAAAG 360  
 5 GCAATGATC CATTGGGCAA ACTATATG C ACCATATCCC 400

(2) INFORMATION FOR SEQ ID NO: 4010:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4010:

ACTAGAGAAG GTATGTTACG TGACAATGAA TTACTAAATG GTATTATTTC ATGAGTTAC 60  
 20 ATCTATAGTT TATTAAAATC AGAATACGAC CAAAAATGAC AAATTAGACT TACAAAAGAG 120  
 TGATGACATT TAAATGGCA GCGCTCTTTT ATTTAATTTT TGAAAATAAA AGGTTGTTGA 180  
 CAGTATTATT TTATAACAAT ATAATGATTT TGATAATTAT TATCAACTAG ATGATGTTTA 240  
 25 TGGGAGGATG CTTTAAAAACA GCCGTTTTAA GTGTAATGTA TTATTTTAGC GTGTAGGGAT 300  
 GCGAAAATAT ATTTATAGGA CACATCTTGG GGATAATnGA TTCTATAAT GAGGTGTCAA 360  
 30 ATGGAAAAGT TACCACGCTA TTATTAGCCn CCACGTTATT 400

(2) INFORMATION FOR SEQ ID NO: 4011:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 494 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4011:

TnTCAATTAG AAAATATCTT ACCGCTGnCT CTATTATATC AATCCTCGTA TTGAATGnT 60  
 45 CGCTTTCCTA GGGTGCCGTC TCAGCATCGG CTTCGACTGG CACTGCTCCC TCAGGAGTCT 120  
 CGCCATTAACT ACTACGTATT AACATGTAAT TTTACTTTGA AATACTTTAA AAAAATAAGA 180  
 CACTTTGCCC AACTTACACT ACCAATAAAA ACTTCTGTTA GAATTCCTCA AAATGATATT 240  
 50 TCGCGACATG TTAATGAAAT TGTTGAAACG ATACCTGATA GCAAAATTCGA TGAATTCAGA 300  
 CATCATCGTG GCGCAACATC CTATCATCCA AAGATGATGT TAAAAATCAT CTTATATGCA 360  
 TATACTCAAT CTGTATTTTC TGGTCGTAGA ATAGAGAAAT TACTTCATGA CAGTATTCGA 420

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GAATCCNAAT ACTG

494

## (2) INFORMATION FOR SEQ ID NO: 4012:

- (1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4012:

TTTCACTTCG CCAAGCCATT TTCTTTGTG TTTACTTTT ATTITGACGT TTTAGACATA	60
AAAAAAGAGA CCTCACGGTC CAACTTGCCT GGCAACGTTT TACTCTAGCG GAAGTAATTG	120
GCTACCATCG TCGCTAAAGA CCTTTCTTGA CTTGTGACAA TCGCTTGCTT CTTTCCTCTC	180
CTTCGGCTCT CGCTTACTCA TTTAGCTCTA CTAAACTCGT TCGCTCTTT TCTCGTTTCG	240
TCAGATTCAA ACGTTTTCAC TTCGCCAAGC CATTTTTCTT TGTGTTTACT TTTTATTTTG	300
ACGTTTTTAGG CATAAAAAAA AGAGACCTTG CGGTCCCAAT GCGGGCTCAT CGCATCCATT	360
TTTTGGCCTG GGCAACGTTT TnTnCCAGC GGAAnTnAAT	400

## (2) INFORMATION FOR SEQ ID NO: 4013:

- (1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4013:

CGAAGTCCCG AACCCGAAGA GCGGATTAC AGTCCGCGC GTTTACCACT TCGCTACCCC	60
TCCAGCTTAT TCATATAATT TAATAATCAA AATGGTGGAG AATGACGGT TCGAACCGCC	120
GACCTCTGTC TTGTAAGGCA GATGCTCTCC CAGCTGAGCT AATCTCTCAA AATAATGACT	180
CCTACGGGAC TCGAACCCGT GTTACCGCCG TGAAAGGGCG GTGTCTTAAC CGCTTGACCA	240
AGGAGCCATG GCTCCACAGG TAGGACTCGA ACCTACGACC GATCGGTTAA CAGCCGATAG	300
CTCTACCACT GAGCTACTGT GGATTATAT TATGCCTGGC AACGTTCTTA CTCTnAGCGG	360
AACGTGAATT CGACTTACCA TCGACGnTAA GGAGCTTnAC	400

## (2) INFORMATION FOR SEQ ID NO: 4014:

- (1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs



(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4014:

	ATTAGGACCT CAAGACGATA TTACTAAATT TGAATCTTA AAAAAATCTT CTCAAAATAC	60
10	AGGTACTTCA TTATTGGTAT TCAACTTAAA GATCATGATG ATTTAATACA ACTCAACAA	120
	CGTGTGAAAT CATTTCGATC CTTCCAATAT TTATATTAAT GAAAAAAGA TGTATATTC	180
	ATTGTTAATT TAACACATAG TAAGAnAAAC AGTCATAAAT TGATTTCTAA TTGAATCAT	240
15	CTTATGACTG CTTTTCACAT ATACTTTACA TTTCTGTTT CGTCAGATTC AAACGTTTTT	300
	ACTTCGCCAA GCCATCTTTC TTGTGTTTG CTTTATTTT GACGTTTTC ACATAAAAAA	360
20	nGnGACCTGC GGTCTCAATG CGGCTTCATC GCATCCACT	400

(2) INFORMATION FOR SEQ ID NO: 4015:

	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 377 base pairs
25	(B) TYPE: nucleic acid
	(C) STRANDEDNESS: double
	(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4015:

	GAATGAAAG CTCTAAAAGT TGTATTTTAA AAATAGTTCT TTAAATTATA TACCCACCAC	60
	ATTTGGGGAG GAACCTAAAA AAAAGCACTT CCCAAAAATG GAAAGTGCAA GTAGTGAGCC	120
35	ATAGAGGATT CGAACCTCTG ACCCTCTGGA TTAAAAGTCA GATGCTCTAC CAACTGAGCT	180
	AATGGCTCTG AATGGCTGGG CTAGCTGGAT TCGAACCAAC GAGTGACGGA GAAAAAGTCC	240
40	GTTGCCTTAC CGCTTGGCTA TAGCCCAATA TATAGATGTT GGAGGGGGGG AGATTGGAAC	300
	TGCCGAACCC GAGGAGGCGG ATTTACAGTC CGCGCGTTT AGCCCACTTC GnTACCCCTG	360
	CCAGnTTATT CATATGA	377

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(2) INFORMATION FOR SEQ ID NO: 4016:

	(i) SEQUENCE CHARACTERISTICS:
	(A) LENGTH: 400 base pairs
	(B) TYPE: nucleic acid
50	(C) STRANDEDNESS: double
	(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4016:

5 ATGACGCACC TGACATCCTC TCGGTTTATA TTCAGGCATA TCCGGACCAC AACTTGGATA 120  
 GTCAGTTTGT TGATTTTCCC AGGTAATCAC ACCATTTTTC ACAAATACTT TCCAAGAACA 180  
 TGAGCCTGTA CAGTTAACAC CATGTGTTGT TTCTTACTTC TTTATCGTGG CTCCAACGTT 240  
 CTCTGTACAT TTTTTCCTAT TCTCTACTTT TACTTTCTAG GATCGACCAA TTCCCATTGA 300  
 10 AATTTTCTGT TTGGCTTAAA GAAATCAATC CAAATTTCCC ATATTATAT CCTCTACGG 360  
 GTGAAAAATA CGGTGTGTAG AAGTGTGTGT TTTTAAAAA 400

(2) INFORMATION FOR SEQ ID NO: 4017:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4017:

25 CTTGAGCGC CTCGTTACC TTTTAGGAGG CGACCGTCCC AGTCAAACCTG CCCGnCTGAC 60  
 ACTGnCTCCC ACCACGATAA GGGCGTGGGT TAGAAAGCCA ACACAGCTAG GGTAGTATCC 120  
 CACCAGCGnC TCCACGTAAG CTAGCGTCA CGTTTCAAAG GCTCCTACCT ATCCTGTACA 180  
 30 AGCTGTGCCG AATTTCaATA TCAGGCTACA GTAAAGCTCC ACGGGGTCTT TCCCTCCTGT 240  
 CGCGGGTAAC CTGCATCTTC ACAGGTACTA TGATTTCACC GAGTCTCTCG TTGAGACAGT 300  
 GCCCAAATCG TTACGTCCTT CGTTGCGGGT CGGAACCTAC CCGACAAGGA ATTTCGTTAC 360  
 35 CTTAGGACCT TATAGTTACG GCCGnCTTTA ATTGGGGTTT 400

(2) INFORMATION FOR SEQ ID NO: 4018:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4018:

TGTCGATTTA AGAGGCGATGC TACGAGGAAT GATTGTCAT CCGAAAAAAG ATCGAGCGGC 60  
 50 ATATGAGGCA CGCAAAGCGA TTCCAACAT TAATGAAAC AGTCGCCAA TATTATTGT 120  
 ACATGAGGGG AAAGACCAGC AAGTTGGTAT TCATCATCGG TATTATTAG CGGACCACT 180  
 AGAGTTAAAA GGTGCCACGC ATGnAAACAT TTTATCAAT GGCAGAAGGA CATGTGCCAA 240

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CGCATAGCIT AGTTATGGAA ACGTGGTGTG CGCATGGGGA ACTATTCAAG CTTTGGAGGA 360  
 TGTGGTACTT ACATGCGTTG GAATTAGGGG TCCGGTTACT 400

(2) INFORMATION FOR SEQ ID NO: 4019:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4019:

GGAGGTTTGG CACCTCGATG TCGGCTCATC GCATCCTGGG GCTGTAGTCG GTCCCAAGGG 60  
 TTGGGCTGTT CGCCCATTAAG AGCGGTACCA AGCTGGGTTT AGAAGTCGT GAGACAGTTC 120  
 GGTCCCTATC CGTCGTGGGC GTAGGAAATT TGAGAGGAGC TGTCTTAGT ACGAGAGGAC 180  
 CGGGATGGAC ATACCTCTGG TGTACCAGTT GTCGTGCCAA CGGCATTAGC TGGGTAGCTA 240  
 TGTGTGGACG GGATAAGTGC TTGAAACATC TTAAGCATGA AGCCCCCTC CAAGATGGAG 300  
 ATTTCCTAAC TTCGGTTTnT AAGATCCCTC CAAAGnTGAT GGAGGTTTAA TAGGTTTCGA 360  
 GGTGGGAAGC AnGGTGGACA GTTGGGAGCT GGACGAnTAC 400

(2) INFORMATION FOR SEQ ID NO: 4020:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4020:

GAAGATGTTT GTCATTCTTC AAATAAACCA GAGCTAGTTG CAATTGTGTA ACCAGCATCT 60  
 AATAGACCGA AAAAGAGAAG TAGACGTGCG GCACCGGCAG ATCTTAATGC AACTCCAGCA 120  
 GATCCAGCGG CTCGAGCGGT AGGAAACGGT GGTGCACCAG TTGCAATTAC AGCGCCATAT 180  
 ACGCCAACAA CTGACTCTAA TGCCAATAAT GCAGGACAAA ATGCACCTAA CCGAnTnTTG 240  
 TCATTTTGTG GACAATGGTA TTAGACCAAG TACCAACCGT TCTGTGCCAA CAGTTAAACG 300  
 TTGTTAATA ACTTGCCTGG CTTCACACTA ATCAATGGTG GGCAAGTAn GGGTGTTTAG 360  
 TCATGCAATG GGTAAGAACG AGCATGTTTG GATTTCAGGG 400

(2) INFORMATION FOR SEQ ID NO: 4021:

(A) LENGTH: 396 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4021:

10	CTAAGTCATG AATGGGAAGT GGCTCGCGTT GAAGAAGGAC TGACTACTGC TGCCACACAG	60
	CTTGCTAAAC AATTATCAGA ATTAGATTTA GCGTCACATC CTTTGTGTAT GTCAGAGCAG	120
	TTTGCAAGTh TAAAGATCG TCCATTTTCAT CCATTAGCTA AAGAAAAAAG AGGATTAGA	180
15	GAAGCGGATT ATCAAGTGTA TCAAGCTGAA TTAATCAAT CATTTCCCTT AATGGTGA	240
	GCAGTTAAAA AGACACATAT GATTTCATGGC GATACTGCAA ATATCGATGA ATTAGAAAAAT	300
20	TTGACAGTAC CTATAAAGA ACAAGCGACA GACATGTAA AATGATCCAA GGTATCAnT	360
	AGATGACTAT GTACCATTCG GGTACnTCCT GGCCAT	396

(2) INFORMATION FOR SEQ ID NO: 4022:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 376 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4022:

	GATTGGTCIG nAAGAAGAAT TAATGGAAAA GCTACGTGAA AAATTAGAAG CGGCATTGA	60
35	TACGATTAC GAATTGTCTC AAAACCGAAA AATAGATATG AGACTTGCAG CATATATCAT	120
	AGGTATTAAA CGTACAGCAG AAGCAGCTAG ATATCGTGGT TGGGCATAAT TAAATTATCAT	180
40	ATGTGATTTA ACGAGCTTGG GACAGAAAAAC AAAGCCCTAA GCTCGTTAAT TTTATTTTAG	240
	CAGTAGTTGA CTGTAAACA ATGCCCGTGT AAAGCTCTT TTCAAAAATA GTCGGGGCCC	300
	CAACACAGAG GCTGGTGGGA AAGTCAGCCT ACAATAGnGT GCAAGTTGGC nGGGGCCCCA	360
45	ACACAGAGGC TGGCGG	376

(2) INFORMATION FOR SEQ ID NO: 4023:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 381 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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	CAAATGGTGG AGCCATAGGA GGATTCGAAC CTCTGACCCCT CTGATTAAAA GTCAGATGCT	60
5	CTACCAACTG AGCTAATGGC TCTTCCATGG nGChGGCCAG AGGACTTGAA CCCCCAACCT	120
	ACTGATTACA AGTCAGTTGC TCTACCAATT GAGCTAGGCC GGCAATATGT AAGAATAAAAT	180
	GGTGAGAGGT GACGGGTTGC AACCGCCGAC CCTCTGCTTG TAAGGCAGAT GCTCTCCCAG	240
10	CTGAGCTAAT TCTCCGATT AAAACTGCCT GGCAACGTTT TACTCTAGCG GAAnTAATTTC	300
	GGACTACCAT CGACGCTAAA GGAGCTTAAC TTCTGTGTTC CGGCATGGGA ACAGGTGTGA	360
	CTCCTTGCTA TATCACCAGA C	381

15 (2) INFORMATION FOR SEQ ID NO: 4024:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4024:

25	GGCCCTTATG ATTTGGGCTA CACACGTGCT ACAATGGACA ATACAAAGGG CAGCGAAACC	60
	GCGAGTCGAA GCAAAATCCCA TAAAGTTGTT CTCAGTTCGG ATTGTAGTCT GCAACTCGAC	120
30	TACATGAAGC TGGAAATCGCT AGTAATCGTA GATCAGCATG CTACGGTGGA ATACGTTCCC	180
	GGGTCTTGTA CACACCGCCC GTCACACCAC GAGAGTTTGT AACACCCGAA GCCGGTGGGA	240
	GTAACCTTTT AAGGAGCTAG CCGTCGAAGG TGGGGACAAA TGGATTGGGG TGAAGTCGTG	300
35	AACAAGGTAG CCGTGATCGG AAGGTGCGGC TGGGATCACC TCCTTTGCTG AAGGATGATG	360
	ATTTCGGrAA CATChTTCIT CCAGAAGATG CCGGTAATAA	400

(2) INFORMATION FOR SEQ ID NO: 4025:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 352 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4025:

50	CTTAGAAGTG AGAATGCCGG TGTGAGTAGC GAAAGACGGG TGAGAAATCC GTCCACCGAT	60
	TGCTAAGGTT TCCAGAGGAA GGCTCGTCCG CTCTGGGTTA GTCGGGTCTT AAGCTGAGGC	120
	CGACAnGTAn GGCAGTGGAT AACAGGTGTA TATTCCTGTA CCACCTATAA TCGTTTTAAT	180

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GCTGAGTAIT AGGCCAAATCC GGTACTCGIT AAGGCTGAGC TGTGATGGGG AGAAGACATT 300  
 GTGTCTTCGA GTCGTTGATT TCACACTGCC GAGAAAAGCC TCTAGATAGA AA 352

(2) INFORMATION FOR SEQ ID NO: 4026:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 370 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4026:

TGGGGCTCTT CCCGTTTCGC TCGCCGCTAC TAAGGGAATC GAATTTTCTT TCTCTTCCTC 60  
 CGGGTACTAA GATGTTTCAG TTCTCGGGT GTGCCTTCTG ATATGCTATG TATTACATA 120  
 TCGATAACAT GACATAACTC ATGCTGGGTT TCCCATTCG GAAATCTCTG GATCAAAGCT 180  
 TACTTACAGC TCCCAAAGC ATATCGTCGT TAGTAACGTC CTTTCATCGC TTCTAGTGCC 240  
 AAGGCATCAC CGTGCGCCCT TAATAACTTA ATCTATGTTT CCACCAITTT TATAAGTCAA 300  
 AnGTTAACAT GAAGTTAGGT TCTTTTATAA AAGGATTAAA nGGGTATTATA ATCTTGTGnG 360  
 TGTCTTTCG 370

(2) INFORMATION FOR SEQ ID NO: 4027:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4027:

TCATGTTTCG CTTGGTTTAA TGCTGTTAAT GCGTTATCGA CACGATGTT TTCACTGAA 60  
 AITTTGTTGT CAGTTGCATC GCCATTGTCA ATAACACGTT GAGCTGCAGT TATTTCAAGT 120  
 TCTGCTTCG CTTCTTCGCA TTATAGTTAT CAATACTTTG TTGCGTCATA CCAGCAGTTG 180  
 ATGGTACTTG GTTCACAGAA CTTTGTAAGT TATTTTTAGA CGTTACTAAT TGGCTATTAT 240  
 CTCCTTTATT TTGAAGTAAT GCTTTACTTG GATCAATCTT AGTTTGTGCG CACGAACCTT 300  
 AGTTAGTGCG TGCAGAACT TGTTGTGGTG TTGCACGCTC ATThATGAAG CACTGTGGT 360  
 GCCTCCGTTT TCGCATAnTG GAITGTTGTT GCGCATGAGG 400

(2) INFORMATION FOR SEQ ID NO: 4028:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4028:

10	CTCATCGCAT CCAATTTTTG CCTGGCAACG TTCTACTCTA GCGGAACGTA AGTTGGCTAC	60
	CATCGTCGCT AAAGACCTTT CTTGACTTGT GACAATCGCT TGCTTCTTTC CTCTCCTTCG	120
	GCTCTCGCTT ACTCATTAG CTCTACTAAA CTGGTGGCGC TCTTTTCTCG TTTCGTGAGA	180
15	TTCAAACGTT TTCACCTCGC CAAGCCATTT TTCTTTGTGT TTACTTTTTA TTTTGACGTT	240
	TTAGACATAA AAAAAAGAGA CCTTGGCGTC TCAATGCGGC TCATCGCATC CATTTTTTGC	300
	CTGGGCAACG TTCTACTCTA GCGGGAACGn AAGTTGGGCT TACCATCGAC GCTAAGAACC	360
20	TTTCTTGGAC TTGGTGGACA AACGnGTGG CTGCTTTTCC	400

(2) INFORMATION FOR SEQ ID NO: 4029:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4029:

	AGGACTTGAA CCCCCAACCT ACTGATTACA AGTCAGTTGC TCTACCAATT GAGTAGGCGC	60
35	GGCAATATGT AAGAATAAAT GGTGGAGAAT GACGGGTTGC AACCGCCGAC CCTCTGCTTG	120
	TAAGGCAGAT GCTCTCCAG CTGAGCTAAT TCTCCGATTT AAAACTGCCT GGCAACGTTT	180
	TACTCTAGCG GAANTAAATC GGACTACCAT CGACGCTAAG GAGCTTAACT TCTGTGTTTCG	240
40	GCATGGGAAC AGGTGTGACC TCCTTGCTAT AGTCACCAGA CATATGAATG TAATTGATA	300
	CATTCAAAAC TAGATAGThA AGTGAAAAGT GATTTTGnT TCGCAAAACC ATTTGATTTT	360
45	GATTGAAGTC CTTCGATCGA TTGAGTGATT CGTGCAGCTn	400

(2) INFORMATION FOR SEQ ID NO: 4030:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 390 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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5 GATGATAAAT CATGTTTTTC ATACCAAGTC GCTGCCGSCA AAACAATGTC AGAATATAAC 60  
 GGTGTGTGCC TCATCTTGAA GTCTAAAGAG ACCACTAAAT CTAACCTACC TGTGTGTTCT 120  
 10 TCACGCCACG TAATTTCTTC TGGCTTTTCA TCTTCATTG GTGTAGCTAA TAACCCGTAT 180  
 TTTGTGCCAA GTAAATGCTT CATAAAGTAT TCTTGACCTT TTGCAGAACT TGAATTAAG 240  
 TTTGAACGCC ATATAAATAA TGATTTTGGG TGATTCCTT CAAATCAGGA TCTTCTATTG 300  
 15 CAAATTGTGG TTTGTnTGG ATTTCAChTC ATCAATTGCA CGTTGCAAAA TCGCTTCATG 360  
 TGAATCTATA CCTGCATCT TGTAGChTCC 390

15 (2) INFORMATION FOR SEQ ID NO: 4031:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 20 (D) TOPOLOGY: linear

25 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4031:

TGGTTCGAAT CCAGCTAGCC CAGTTATTGG CGGCATAGCA AGTGGAAGG CAGAGGTCTG 60  
 CAAAACCTTT ATCACC GGTT CAAATCCGGT TGCCGCTCC AGGTTTATGC GGGAGTAGTT 120  
 30 CAACTTTTAG AACACGTTCC TTCCCGGAAn GAGGTATAGG TGCAAACTCT ATCTCCGCT 180  
 CCATAATTTA ATAATAATGC GGGAGTATTT CAACTCTTAG AATACATTCC TTCTGGGAAT 240  
 GAGGTATAGG TGTAATCTCT ATCTCCGCT CCATAATTTA ATATTTGCGG GGAGTAGTTC 300  
 35 CAACTTTTAG AACACGTTCC TTCCCGGGAA GGAGGTATAn GTGTATCCTA TCTTCCGChC 360  
 CATAATGCCT TCCAAAGGGG AATTTTTTGG TTTnACCATT 400

40 (2) INFORMATION FOR SEQ ID NO: 4032:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 45 (D) TOPOLOGY: linear

50 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4032:

GTATCGATGA GTTCTTCGG TCGTCTTCG ACAGCCATTG TGACTTCGAC AAAATGCATC 60  
 ACATCGGGAT GACCATTAAAT TGCAATTAAC GTGTCTTGTA AATCTTTTGA TGATTCAACG 120  
 55 TCATGAATTT CAACATTTTT ACCACCAAAAT ACAGCTGGTA AAGCTTTTATA ATCCCACATG 180



TTATTAATCA CCAATAATAC CGGGTTAATA TGCTGTCTAA TCATAGTTGG AAATAGCTTG 300  
 AACAGTTAGT TGGCCATGAG CCATACCCCA TTATAATAA AGTTACGACG GATCTTTGGT 360  
 5 CTGCCAATTG GGGGAnCnCA ATGTTGCAGG GnAATGGTAT 400

(2) INFORMATION FOR SEQ ID NO: 4033:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4033:

CACGACGTTT TGAACCCAGC TGGCGTACCG CTTTAATGGG CGAACAGCCC AACCCTTggG 60  
 20 ACCGACTACA GCCCCcAGGA TGGGATGAGC CGACATCGAG GTGCCAAACt CCCCGTCGAT 120  
 GTGAACCTCT GGGGGAGATA AGCCTGTTAT CCCCGGGGTA GCTTTTATCC GTTGAGCGAT 180  
 GGCCCTTCCA TGGGGAACCA CGGATCACT AAGTCCGTCT TTCGACCCTG CTCGACTTGT 240  
 25 AGGTCTCGCA GTCAAGCTCC CTTATGCCTT TACACTCTAT GAATGATTCC AACCATTCTG 300  
 AGGGAACTTT GAAGCGCTCC GTACCTTTTA AGAnGGCGAC CGGCCcAGTC AAACCTGGCCG 360  
 30 CTGACACTGT CTTCCAACAC GATAAGTGGT GCGGGTTAGA 400

(2) INFORMATION FOR SEQ ID NO: 4034:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4034:

AATTCATGT GTACGGTTGA AATGCGCAGA GATATGGAGG AACACCAGTG nCGAAGCGAC 60  
 45 TTCTGGTCT GTAAGTACG CTTGATGTGG AAACGTGGGG ATCAACACAGG ATTAGATACC 120  
 CTGGTAGTCC ACGCCGTAAA CGATGAGTGC TAAGTGTTAG GGGGTTTCCG CCCCTTAGTG 180  
 CTGCAGCTAA CGCATTAAGC ACTCCGCCTG GGGAGTACGA CCGCAAGTTG GAAACTCAAA 240  
 50 GGAATTGACG GGGACCcGCA CAAGCGTGGn AGCATGTGGT TTAnTTCGAA CAACCGAGAG 300  
 AACCTTACCA AATCTTGACA TCCTTTGACA ACTCTAGAGA TAAAGCCTCC CCTTCGGGGA 360  
 CAAATGACAG TGGTGcAnGT TGTCTCACT CGTGTCTGA 400

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4035:

TTCGCTTTGC	CCGTCTGTCA	CATTACTGTA	AAATCTATA	AATAGAATTT	TTGATGACGG	60
GTCCCTTCCT	AGGGTGCCGT	CTCAGCCACC	CCAACCGGCA	CATTGTTGTA	AGCTGACTAT	120
ATGCTACTTC	TGTGTTGGGG	CCCCGTGCTT	CGACTGGCAC	TGCTCCCTCA	GGAGTCTCGC	180
CATTAATACT	ACGTATTAAC	ATGTAATTTT	ACTTTGAAAT	ACATTAAAGC	CCAAATTAAT	240
CAAAAGCTTT	CTGAACACGA	AACGAAAAAA	ATCTATAGTC	ATAGAAAAAT	TTATGTAGAG	300
CCTGTTTTTG	GATTATATGA	GGCTATTGGG	GGTTCACCTG	AATGTCAGTT	CGAGGAATAA	360
TAAAGThAAC	GAGAGCCAGG	TTTGTAATTA	TGGCACThAT			400

(2) INFORMATION FOR SEQ ID NO: 4036:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4036:

TAAATGTTGA	AAAAGCACGA	TTAGATAGAA	TTTTGAATAA	CAATGAAATT	CGTCAAATGA	60
TCACAGCATT	TGGTACAGGA	ATCGGTGGCG	ACTTTGATCT	AGCGAAAGCA	AGATATCACA	120
AAATCGTCAT	TATGACTGAT	GCCGATGTGG	ATGGAGCGCA	TATTAGAACA	TTGTTATTAA	180
CATTCTTCTA	TOGATTIATG	AGACCGTTAA	TTGAAGCAGG	CTATGTGTAT	ATTGCACAGC	240
CACCGTTGTA	TAAACTGACA	CAAGGTAAAC	AAAAGTATTA	TGTATACAA	GATAGGGGAC	300
TTGATAAACT	TAAATCTGAA	TTGAATCCAA	CACCAAAATG	GCTATTGCAC	GTACAAAGGC	360
TTGGAGAATG	AATGCAGTCC	ATTGCGGAAC	ACATGACCTG			400

(2) INFORMATION FOR SEQ ID NO: 4037:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 381 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4037:

TCGTCGCTAA AGACCTTTCT TGACTTGTGA CAATCGCTTG CTTCCTTCTC CTCCTTCGGC 60  
 5 TCTCGCTTAC TCATTTAGCT CTACTAAACT GGTGCGCTC TTTTCGCTT TCGTCAGATT 120  
 CAAACGTTTT CACTTCGCCA AGCCATTTTT CTTTGTGTTT ACTTTTTATT TTGACGTTTT 180  
 10 AGACATAAAA AAAAGAGACC TTGCGGTCTC AATGCGGCTC ATCGCATCCA TTTTTCGCTT 240  
 GGCAACGTTT TACTCTAGCG GAANTAAATT GGGTACCAT CGACGCTAAG AACCTTTCTT 300  
 GACTTGTGAC AATCGCTTGC TTCTTCTCTC TTCTTCGGCT CTCGCTTACn CATTTAGCTC 360  
 15 TACnAAACTC GTTGCCTCT T 381

## (2) INFORMATION FOR SEQ ID NO: 4038:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 360 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4038:

CTGTTTGTCa TACTTCATAA ATCCTTTAAA TTCACCCATC GTATCTCCCC CTTTCCTTAA 60  
 30 TACACAACGG CTGCTTTATG TTTAGCATCG ATTGTTTTAC TGTCATCGTA AAATGCAGCT 120  
 AACATCGCTT CATCTTCATT GTCATGTAAT GATTGTGCA AATGAATTTT TTGCATCATT 180  
 AATTGATAAT CTTTAGGAAT AACTTTAACG ACGACATCTT CAATGCGATC AAAATGTTTT 240  
 35 AACACATGAA TCGCTCTCGT ACTATTCTGT TGTGACACAT GTnCTTCCAG CATTGCTTA 300  
 ATGAATGCTT TnCTTCTTG GTGTTTAATC TTTGTAAACG AAAGCGTATC TAGTGATAnG 360

## (2) INFORMATION FOR SEQ ID NO: 4039:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4039:

AGTGCAACCC CATAACCTCT TGATCCGTAG TCAAACGCTC TATCCAATTG AGTACGGGC 60  
 50 GCATATGTTT TTATTGAAAA TGGTGCGGAG GACCGGAATC GAACCGGTAG TGAATGCACT 120  
 CACCGCAGAT TTAAAGTCTT GTGCGTCTGC CAGTTCGGCC ACCCGGCAC TATAAAAAATG 180

GAAGTACTTTC TGCATATGCG GGTGAAGGGA GTCGAACCCC CACGCCGTAA GCTnAGGATC 300  
 CTAAGTCTAG TGCCTCTGCC AATTCGCCA CACCGCAAA TGCTGAGCCA TAGAGGATTC 360  
 5 GAACCTCTGG ACCCTCTGGA TTA AAAAGTC AGATGCTCTA 400

(2) INFORMATION FOR SEQ ID NO: 4040:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 378 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4040:

CTTCTCTGAC TTGTGACAAT CGCTTGCTTC TTCTCTCTCC TTCGGCTCTC GCTTACTCAT 60  
 20 TTAGCTCTAC TAAACTCGTT GCGCTCTTTT CTCGTTTCGT CAGATTCAAA CGTTTCACT 120  
 TOGCCAAGCC ATTTTCTTTT GTGTTTACTT TTTATTTTGA CGTTTCTAGC ATAAAAAAG 180  
 AGACCTCAGC GTCTCAACTT GCCTGGCAAC GTTCTACTCT AGCGGAACGT AAGTTGGCTA 240  
 25 CCATCGTCGC TAAAGACCTT TCTTGACTTG TGACAATCGC TTGCTTCTTT CCTCTCCTTC 300  
 GGCTCTCGCn TACTCATTIA GCTCnACTAA ACTCGTTGCG CTCTTGTTCT CGTTTCGGGC 360  
 30 AGATTCAAAC GntTGTCa 378

(2) INFORMATION FOR SEQ ID NO: 4041:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4041:

GTACCTTAAC AATATCTCGA AATGGACGAA CTAAATTATG AACCGCATGA AAGGATACTT 60  
 45 GCGAATCATT TGAGCATGCT TGAATCATAA TATCACCATC GCTGTAATCG TCTATTAACT 120  
 GATCATTTCGG AAAATGCGGT AAATCTTTAA AGGCATCGGG AATTTTACTA GATAACCCAA 180  
 TTTTCTTCAT CAAGACTTA CTAATCCCAA AGGTAATCGT TAACTTGCTT GCACCTAATC 240  
 50 CTATCGATTG ACCGGTATCT ACTGGTGGGC ATTAAAGGAT TGTTACTCGG GCTTGGCCAA 300  
 CTGTATCACC ATCCATCATA CGATTGAGCC ATAACGGTCC ACTTTTAA ACATTGGCTT 360  
 TATTGGCACC CnAACCTTTG GACTTCnAAT CTAACGGCCA 400

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4042:

10

GACTTGCAAA CGTTGTGATG ACGGTCAAGA AAACGGTAA CACACCAGAC GGACGTAAAG	60
CTGGCGAACC ATTTGCTCCA GGTGCAAAACC CAATGCATGG CCGTGACCAA AAAGGTGCAT	120
TATCTTCATT AAGTCTTGTA GCTAAGATCC CTTACGATTG CTGTAAAGAT GGTATTTCAA	180
ATACATTCAG TATCGTACCA AAATCATTAG GTAAAGAACC AGAAGATCAA AACCGTAACT	240
TAACTAGTAT GTTAGATGGT TACGCAATGC AATGTGTC CAACCTAAAT ATTAACGTAT	300
TTAACCGTGA AACATTAATA GATGCAATGG AACATCCAGA AGGAATATCC ACAGTTAAAC	360
ATCCGTGTAT CTGGTTACGC TGTTAACTTC ATTAAATTAA	400

## (2) INFORMATION FOR SEQ ID NO: 4043:

25

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

30

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4043:

35

CTATTITATC TAAAGTTAAA CCTGACCCAC CTAGAATTGA CGAAACTCT GTGACATATA	60
AAGCAGGTCT TACAAACCAA GAAATTAAAG TTAATAACGT ATTAATAAC TCGTCAGTAA	120
AATTATTTAA AGCAGATAAT ACACCATTAA ATGTCACAAA TATTACTCAT GGTAGCGGTT	180
TTAGTTCGGT TGTGACAGTA AGTGACGCGT TACCAATGG CGGAATTAAA GCAAAATCTT	240
CAATTTCAAT GAACAATGTG ACGTATACGA CGCAAGACGA ACATGGTCAA GTTGTTACAG	300
TAACAAGAAA TGAATCTGTT GATTCAAATG ACAGTGCACA GTGAACAGTG GACACCACAA	360
TTGACAAGCC AACTACTGAA GCGCGnGTGn TTATTAAAAA	400

45

## (2) INFORMATION FOR SEQ ID NO: 4044:

50

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 375 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4044:

5 AAAAAAGGCTT GATTTGAAAA ACGACCAGCA TCGCTACTG GATAATAGC GAGGCTACCA 60  
 TGTGTTTCA TCGTAGGCGC ATGTTAGTTA ATCCAGGGAT ACAAGCATCA TGATCAATAT 120  
 TAAAGCCATA TTCAACAAT TGACCATAAG GTTCAATGTA AGCAGCGCCG GTGCACITGC 180  
 10 ATTCAGCTG AATTAGAGCG ACGTGCAGCA TAAGCCAAAT CTTCCTTTGT AATATAGCCT 240  
 TCTTTTGTG ATGTGTTTAC GGTCCATTGG GTGGATAATA CAAAGCGATT CGAAATTTTG 300  
 ATGCCATTAG GTAAGTGGAT TGATTGTAAA AGTGTTTGT ATCGGTACAT ACTATGATTC 360  
 15 CnTTTCCATT GCAAT 375

(2) INFORMATION FOR SEQ ID NO: 4045:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4045:

25 GTTCCAATGA AGATAGCTAG AATGATATC CAAAACACAT GATGCATCAC TGGTGATGCT 60  
 30 CGACTAATTG TATTCCATGA TGCATTAATA ATAATGACCA ATACACATAA AATAAGCAGC 120  
 CATTATCGT TTTTTTTAAA AATATAATGC AGCAAAAAATC CAAAATGAT TAATTGCACA 180  
 ACTGCTCGTA ATGTCGCAAC AATTAAATCT TTAATAATAT GTAAACCTTC TTTATATGAA 240  
 35 ATGATAATCG GAATGACTAA AAGCAATGCC GTCAATCCAA GTGCCGTATT ACTCATGTnG 300  
 ATTCAACTCC TCTGTATTAG AAATTGACC ATCAACAATT GTTATACGCT TTTTGTnAAGT 360  
 GGTGCGATAC TTTGGGGCAT CGCTGTGGGG TAGGGGGnCh 400

(2) INFORMATION FOR SEQ ID NO: 4046:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 375 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4046:

50 CGAGTCTGAG TCGTGTCTG AATCTGAATC GCTGCTGAG TCCGAATGCG TATCTGAATC 60  
 TGAGTCGCTG TCTGAGTCTG AATCGCTATC TGAATCTGAG TCGCTATCTG AGTCTGAGTC 120

TGAGTCTGAG TCGCTATCTG AGTCTGAGTC GCTGTCGAA TCTGGAGTCG CTGTCGAAT 240  
 CTGGAATCGC TGCTCGAGT CTGAATCGCT ATCTGAGTCT GGAATCGCTA TCTGAGTCTG 300  
 AATCACTGGT CTGGAGTCCG AGTCACTGTC TGAATCTGAC TGCACThAcn GGATTCTGAG 360  
 TCGCTAAcng GAATC 375

(2) INFORMATION FOR SEQ ID NO: 4047:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4047:

ATGGGTAAAA AGGCATTAGA GTCAATCATT GATAACGCTG ATGAAACAAC TCAAGAGCGT 60  
 TTACGTTTACG GATATGAAGA TGCTGTAGAT TATAACCGTT ATGTCGGTAA TATTTATACT 120  
 GGATCATTTAT ATTTAAGCCT AATATCATT CTTGAAAATC GAGATTACA AGCTGGTGAA 180  
 ACAATCGGTT TATTCAGTTA TGGCTCAGGT TCAGTTGGTG AATTTTATAG TGCACATTA 240  
 GTTGAAGGCT ACAAGATCA TTTAGATCAA GCTGCACATA AAGCATTATT AAATAACCGT 300  
 ACTGAnGTAT CTGTTGGATG GCATATGGAA ACATTCTTCC AACCGTTTG GATGACGGTG 360  
 GAATTTGACG GnGGACCAAG ATGcnTGTTC CAGGAGGTCC 400

(2) INFORMATION FOR SEQ ID NO: 4048:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4048:

CAAAACATCT GACATAATAT ACACCTGGAT GTTAGATAAG GGTTTGCCAA TTGGAATCGT 60  
 CTCAGGTATC AATCACCACA ATGATGTGAC CAATACGATG TGATGACTGT TGA CTGAGAT 120  
 GGTCCATAGG CATTTGAAATA CGTGCCACAA TGCTTCTCAA TATATTTAAC AAAGGATGCC 180  
 GTACTAGTTG CCCC GCCTGT AATCAACTTT TCAATATAAA AGTCTTCCAT AACACTACAC 240  
 ATCTGTAAAC GAATCGACGC AACCGTCACA CGATGCTTAT TAATGAGTTG TTGTAACGT 300  
 TCTGATTAA CACGnTCTCT TCTATCTGGA nTCACAAGCG TATGACCATT AACAAACAAC 360

## (2) INFORMATION FOR SEQ ID NO: 4049:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4049:

TCGTCATGTT	CTGAGATCC	ACCAAAATGTT	AAATGGGTAT	GTGCATCTAC	TAATGCTGGG	60
GACACTACCT	TCCCACTAGC	ATCAATCGTC	TCAGTCGCAT	CGTAGTCATC	TGTATGTGTT	120
CCAGCATATA	CAATTTTGGC	CATCTTTAAT	GACAACTGTA	CCATTTTTC	CAACATTTGA	180
ATTTCATCTAA	TTCTTTACCC	TTCAAAGGTT	TATCTGTTGA	TCTCGGTAAA	ATTAATTGCT	240
GCTATATGAT	TATATTTAA	TCATTCATTA	CTATCACCTG	CTTATCAATC	ATGGAATAGA	300
ATACCTTTTC	NTTAGCGTTT	GAATAGCGAG	TCATAGCCAG	CATCAACATG	TCGGGCAACA	360
CCCATACCGG	GGTCATCGTC	CAATACAGT	TCCAACTnC			400

## (2) INFORMATION FOR SEQ ID NO: 4050:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4050:

ATCACCCATG	TTCTGACTCC	CAAGTTAAAT	TAATTGGCAT	TCGGAGTTTG	TCTGAATTCG	60
GTAACCCGAG	AGGGGCCCTC	CGTCCAAACA	GTGCTCTACC	TCCAATAATC	ATCACTTGAG	120
GCTAGCCCTA	AAGCTATTTT	GGAGAGAACC	AGCTATTTC	AGGTTCCGATT	GGAATTTCTC	180
CGCTACCCCT	AGTTTCATCG	CTCACTTTTC	AAGTAAGTC	GGTTCGGTCC	TCCAITCAGT	240
GTTACCTGAA	CTTCAACCTG	ACCAAGGGTA	GATCACCTGG	TTTCGGGTCT	ACGACAAATA	300
CTAAACGCCT	ATTCAGCTCG	NTTCGTACGG	CTCCACATT	ACTGCTAAnC	TTGCATCAAT	360
CGTACTCGCG	GTCAATCTAC	AAAAGnACGC	ATCACCAAnTA			400

## (2) INFORMATION FOR SEQ ID NO: 4051:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double



## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4051:

5 AGTGAAATG ACTTTATCGG GCTGTTGAGC GATATGGATT TGAGTTCAAC GCGACTAGGT 60  
 AACAAATGTCA AAGAACGTAC TGCTTTAATC TCTAAAGTCA TGGTTAATCT TGACGACTTA 120  
 10 CCATTGCTTC ACAGTGACAT GGAATTTGAT ATGTTAGGTG ATGCATATGA ATTCTTAATC 180  
 GGGCGCTTTG CGGCGACAGC GGGTAAAAA GCAGGCGAGT TCTATACACC ACAACAAGTA 240  
 TCTAAGATAC TGGCGAAGTT GTCACAGACG GTAAAGAThA ATTACGTCAC GTGTAACGAC 300  
 15 CCAACATGTG GgTCCGGTT CATTGTGGTA ACGTGTGGT AAAGAACGCA AGTGTATCGT 360  
 TAATTGGGAC nAAGAACGTa ACATACTAC nTACGACTTA 400

## (2) INFORMATION FOR SEQ ID NO: 4052:

20 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 390 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 25 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4052:

30 TCCTACAACC CCAACAAGCA AGCTTGTGGT GTTGGGCTCT TCCGTTTTCG CTCGCCGCTA 60  
 CTAAGGGAAT CGAATTTTCT TTCTCTTCCT CCGGGTACTA AGATGTTTCA GTTCTCCGGG 120  
 TGTGCTTTCT GATATGCTAT GTATTACAT ATCGATAACA TGACATAACT CATGCTGGGT 180  
 35 TTCCCCATTC GGAATCTCT GGATCAAAGC TTACTTACAG CTCGCCAAG CATATCGTCG 240  
 TTAGTAACGT CTTTCATCGG CTTCTAGTGC CAAGGCATCC ACCGTGCGGC CCTTAATAAC 300  
 TTAATChATG TTTTCACCA TTTTTATAA GThCAAAGGC TTCACATAG GCTTCGGTTT 360  
 40 TTCATTAAAT TAAATGGCh CAATTTAACA 390

## (2) INFORMATION FOR SEQ ID NO: 4053:

45 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 50 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4053:

55 AACATACCGA TGTATATAAT CTATACACAA AGGATAATTA CTTATGCAAA GGCGAGGAA 60

5 GTCGATIGCG AATGATTITAA GAGGGAACAT GGATGCGAGT GAATTCGTA ATTACATITT 180  
 AGGCTTGATT TTCTATCGTT TCTTATCTGA AAAAGCCGAA CAAGAATATG CAGATGCGCTT 240  
 10 GTCAGGTGAA GACATCACGT ATCAAGAAGC ATGGGCAGAT GAAGAATATC GTGAAGACTT 300  
 AAAAGCAGAA TTAATTGATC AAAGTCGGTT ACTTCATTGA GCCACAAGAT TTATTCAGTG 360  
 CGATGATCGT GAAATTGAA CGCAGATT CCGATATAGA 400

(2) INFORMATION FOR SEQ ID NO: 4054:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4054:

GTAAGACCAT CGTACTTGAG TCTTCAAGTG TTCTTGATAA AACGGAACGA GAGACTTGGT 60  
 ATTTTTCGAA CAAATCTTTC ATTAACACAC CGACCATAAT AATTACAATC GAAGCAACAC 120  
 25 CTGCAGCGAA TACAAGCGCA ATACAACAAA TAACAGTAAT ACATATTAAA CTCCTACAG 180  
 AATGGATGCC TTTAGAAATA GTAGTTAATA AGACTTCTAA ACATCCTGCT TTTCTACAA 240  
 30 TACCTGCAAA TGCATATCCG CAAAATATCG TTACTAATAT TTGGGnCATA CTCATCATA 300  
 CACCCTGTTT TAACAAGCTT TCACACTGGA TGAATATGAG nTGATGTATC ATTGATCGTT 360  
 AAACCCTAAT GTGCTTTGAA CCATCGTCAT TTGAATGTGA 400

35 (2) INFORMATION FOR SEQ ID NO: 4055:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4055:

CGTCTACAAG TTCAAAATTC AAGTCTTCCA TAATTGGTTT AACAACTACT TCTACTTGT 60  
 CTGTAATTTT ACTCATACAG GCCTCCCTTT TTGGCAAATA GAAAAGAGCG GGAATCTCCC 120  
 50 ACTCTCTGCG CTGAGTTCAC TAATTTTAA GCAACTTAAT TATAGCATAA GTTTATGCTT 180  
 GAAACAAATG ACTTCACTAT TAATCAGAGA TTCTTGTAAG AGTTTGTTCC TTTATTTTCA 240  
 CATTACATTT GAATAGACTC GTAAGACATT GAAAAGAAAT ACGGCATAA TTTTGTTGCC 300

55

TCATTITTACA TATCAAATAT CGGAAGTIGA GCTTTATCTG 400

(2) INFORMATION FOR SEQ ID NO: 4056:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 481 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4056:

15 ATTTTGGTTT ACTTCATGTT GAGTTT TAGA CATTTTAACC ATCTCCAATA TAAAAATAAA 60  
 TTAAATTAAA TTTCAGGGA CTTCATGAC GCCACCTGTA TTTGCGCTAG TTACTAGGGC 120  
 AGTATAACGA GCTAGATAAC CTGTTTTTAC TTTGCGTTTA AATGGTGTTA AAGATTCTCG 180  
 20 GCGACGCGCT AGAATCATCTT CAGGCTGGTT TACGTTTAAT GTACGATTGT TTAATCAAT 240  
 AGTAATCTCA TCACCATCTT CAATTAAGGc AATTGGTCCA CCAGATGCAG CTTCAGGGGA 300  
 AATATGACCA ACTGcAATAC CTCTTGTTGc ACCGGtAAAA ACGCCCATCA GTkAAATTAAT 360  
 25 GcAaCATCTT TACCTAAGCC GCGaCCAACA ATAGAGGAAG TAGGTGCTAA CATTTCAGG 420  
 nCATACCTGG GTCCACCTTT TAGGTGCCTT TCAnTATCTn ATGGACAACG ACGTGGGCCT 480  
 30 G 481

(2) INFORMATION FOR SEQ ID NO: 4057:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 379 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4057:

TTTTTGCTG GCAACGTTCT ACTCTAGCGG AACGTAAGTT GGCTACCATC GTCGCTAAAG 60  
 45 ACCITTCTTG ACTTG TGACA ATCGCTTGCT TCTTCTCTCT CCTTCGGCTC TCGCTTACTC 120  
 ATTTAGCTCT ACTAAACTCG TTGCGCTCTT TTCTCGTTTC GTCAGATTCA AACGTTTCA 180  
 CTTGCGCAAG CCATTTTTCT TTGTGTTTAC TTTTATTTT GGACGTTTTA GACATAAAAA 240  
 50 AAAGAGACCT TCGGCTCTCA ATGCGGCTCA TCGCATCCAT TTTTTCGCTG GCAACGTTCT 300  
 ACTCTAGCGG AAGTAAATTG GGCTACCAnC GACGCTAAGA ACCTTTCCTG GACTGTGACA 360  
 ATCGGCTGCh TCTGTnCTT 379

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4058:

CTGCATCACT	GCCATAAAAA	CTACCGTCAG	CAGCGATAGn	CGGCCAATCA	TACCAGGAAC	60
AGACCGGGC	TTGTCAGCGA	TACTAACAGC	GATATATCCA	GCTAGTATTG	GAACCATAAA	120
TTTAAAGGCT	AAACTACCAA	TGTTTTCAAT	GGATTTCCAA	AATGAATCAT	CTGGGATGAC	180
TAATCCTTTT	GATGTCGTTT	CACCGCCTAG	AGTCAGCGCG	ATGGCGATAA	GGAGTCCACC	240
AACTACGATA	AAAGGAACCA	TAAAGATAC	ACCGTTCATT	AAATGTTGAT	ACACCATTTG	300
AATACCAITT	TAGACTnACC	GCGATCTTTC	GAATGATAAT	TTGTTTCAGA	TGGTTAAATA	360
GGCGCATTTG	ATTTAATGAT	ACGTGGATT	GGACCTTCGG			400

(2) INFORMATION FOR SEQ ID NO: 4059:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 367 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4059:

TTAAAAAAT	GCCTGGAAC	GTCTACTCT	AGCGGAAC	AGTnGAnCTA	CCATCGACGC	60
TAAGAGGCTT	AACCTCTGTG	TTGGCATGG	GAACAGGTGT	GACCTCCTTG	CTATAGTCAC	120
CAGACATATG	AATGTAATTT	ATACATTCAA	AACTAGATAG	TAAGTAAAAA	TGATTTTGCT	180
TGCGAAAACA	TTTATTTTGG	ATTAAGTCTT	CGATCGAITA	GTATTCGTCA	GCTCCACATG	240
TCACCATGCT	TCCACCTCGG	AACCTATTAA	CCTCATCATC	TTTGGAGGGA	TCTTATAAAC	300
CGAAATTGGG	GAAATCTCAT	CTTGAGGGGG	GCTnCATGC	TTAGATGCTT	TCCAGCACTT	360
ATCCCGT						367

(2) INFORMATION FOR SEQ ID NO: 4060:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 374 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4060:

5 T T C C G n A C T C A C A T A G C G A C T C A G A G G A T T C A G A C A G C G C A T T C A G A T T C A G A C A C C G C A T T 60  
 C A G A T T C A G C A T A G C G A T T C A G C A T T C C G C A C A G T G A C T C A G n A T T C C G A C A G T G A C T G 120  
 G A T T C A G A T A G C G A T T C A G A T T C C G A C A G T G A C T C A G A T T C C G A C A G T G A C T C A G A C T C A 180  
 10 G A C A G T G A T T C G G A T T C A G C A G T G A T T C G G A T T C A G A T T C C G A T T C C G A T T C C G A C A G T 240  
 G A C T C G G A T T C A G A T A G C G A C T C A G A C T C G G A T A G C G A C T C G G A T T C A G A T A G C G A T T C G 300  
 G A C T C A G A T A G C G A T T C A G A T C A G A C A G C G A T T C A G A T T C A G A C A G C G A C T C A G A C A G T 360  
 15 G A C T C A G A T T C A G A 374

## (2) INFORMATION FOR SEQ ID NO: 4061:

## (i) SEQUENCE CHARACTERISTICS:

20 (A) LENGTH: 432 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4061:

25 A A A A T C A T A A T A T T T T G G C A A T T T T T T C A A C T T G A C T C T G G T C C T T C T G C A T A A C T G C C G T 60  
 30 A A A T A A T T C A C C T T C A T C A C A C G C T G T A C C T A C C A A T A A T C C C T C A C G A T A T T C A T C T A A 120  
 C A A T G A A C G T G G A A T T C G A G G T G A C G G T A G A A A T A C T T C A C C A A T G A T G C A C T T A C A A T 180  
 T T T A A A T A G A T T T T A A G A C C T T G T T G G T T T G T A C A A T T A A T G T G A C A T G A C T A G G T C T 240  
 35 T G C A C G T T T A T A T G C A T C T T C A T T A C T G A G T T T T T K G T t G A T T T C G T T A T G A T T T A A T A C 300  
 G C C T A A W C y T T C A T T T G T T G A A C C A T T T T A T G A A A A T G T A A G C T G T T G C T T C T G T A T C 360  
 40 A T A A A T G G C A C G G T G A T G T T G G T T A A T T C T A C G C C A T A T T T T T A G C C A A G A A A A T T C A A 420  
 A C C A T G T T T A C C 432

## (2) INFORMATION FOR SEQ ID NO: 4062:

## (i) SEQUENCE CHARACTERISTICS:

45 (A) LENGTH: 386 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4062:

55 T A T C T T C G T T C T C A A T A G A A T G A T T T A A A C C T T C G A T T T C T T A T C T A A A T G A C T A C C A A 60

TTTTTCTTC AACTAAGTCA CGATATAATG TTTTGAATT TTCGTTCAT TTCGATTTCGT 180  
 GATTTTGAAT ACTTTTCTTC CACACAAATG TATACCTATT GGCATTAGCT TCTACTTTTG 240  
 5 TACCATCAAT AAGATTTTGC TTAAACATT GACTATGAAA CTGGGATAAA TAAAGANTCA 300  
 ATTAACGCAT CAGTATTAGG GANTCACTCT AATACGATTA ATAGTTTTTA TAAGAAGGTG 360  
 nTTGATTTG GAGCTAACCA CATCCA 386

10 (2) INFORMATION FOR SEQ ID NO: 4063:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 386 base pairs  
 (B) TYPE: nucleic acid  
 15 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4063:

TAGGAGAGCG TTCTAAGGCG GTAGCATGAT CGTAAGGACA TGTGGAGCGC TTAGGAGAAT 60  
 GCCCGTGTGA GTAGCGAAAG ACGGCTGAGA ATCCCGTCCA CCGATTGACT AAGGTTTCCA 120  
 25 GAGGAAGGCT CGTCCGCTCT GGGTTAGTCG GGTCTAAGC TGAGGCCGAC ACGTAGGGCG 180  
 ATGGATAACA GGTGATATT CCTGTACCAC CTATGAATCG TTTAATCGA TGGGGGACG 240  
 CATAGGTATA GGCAGGTGA CGATTGGGAT TGCACGCTTT AAGCAGTAAG GCTGAGTATT 300  
 30 AGGCAATCC GGTACTCGTT nAAGGCTTGA GCTGTGGATG GGGAGAAGAC ATnGAGTCTT 360  
 CGAGTTCGTT GcNTTTCACA ATGGCC 386

35 (2) INFORMATION FOR SEQ ID NO: 4064:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 386 base pairs  
 (B) TYPE: nucleic acid  
 40 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4064:

45 TAAGGCAGAT GCTCTCCAG CTGAGCTAAT TCTCCGATT AAAACTGCCT GGCAACGTT 60  
 TACTCTAGCG GAACGTAAGT TGGAGCTACC ATCGACGCTA AGGAGCTTAA CTCTGTGTT 120  
 50 CGGCATGGGA ACAGGTGTGA CCTCCTTGCT ATAGTCACCA GACATATGAA TGTAATTTAT 180  
 ACATTCAAAA CTAGATAGTA AGTAAAGTG ATTTTGCTTC GCAACATT ATTTTGATTA 240  
 AGTCTTCGAT CGANTAGTAT TGCTCAGCTC CACATGTCAC CATGCTTCCA CCTCGAACCT 300

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AGGGGGGCT TCATGCCITT AGAATG

386

(2) INFORMATION FOR SEQ ID NO: 4065:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4065:

15	AATTCTTTCG CTACTTGAAT GACAACACTT TGTTTACGC CTGAAATGGC TTCTTGCCAA	60
	GCAGGTGTAT ATTTTGATTC TGCATCGTCG TATCCTTTTG ATTCTAATTT ATGATCAAAA	120
	CGACGCACGC CATATTGACT TGCCATTAAG TCAAAAATTG TAGCAATACG GACTTTGTCA	180
20	CCATTGTCTA AAGTGACTTG TCGAGTTGGA ATTGGACGAT TGAATATCCC ATCTCCATCA	240
	CTATCAAGAT ATGGGAATTG AATTGTTTCT AATTCSTATC CACCTTCGTG CATTGATAAT	300
	GTAGGGTTAA TTTTAGAACC ATCTTCTGTT TCTAGTTTAA AGTTCCACTT CTACCTTCT	360
25	TCCCAACGTG GACCCATGGT GCCATTAnGn ACTACTAAAC	400

(2) INFORMATION FOR SEQ ID NO: 4066:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4066:

40	ATTTTGAAT TGAGAAAACA ACTTATTGAA AAACATAATC TTTACGGTAA CATGGGTCA	60
	GGAACAATCG TTATTAAAT GAAAAACGGT GGGAAATATA CGTTTGAATT ACACAAAAAA	120
	CTGCAGAGCA TCGTATGGCA GACGTCATAG ATGGCACTAA TATTGATAAC ATTGAAGTGA	180
45	ATATAAAATA ATCATGACAT TCTCTAAATA GAAGCTGTCA TCGGAAAAAC AAGAAGTTAA	240
	GTGACAACGG TTACATGTT GCTTAGCTTC TTTTATTATG CGTAATGATG TAAAAAGACG	300
	nATATTCAAT TGTTGTAA AGTGGCATTC TATGCTTAA AGTGACGnAA CTTCCAATGT	360
50	GCCAGTGTG TGATTCACAT CAAATCCATT TTTATTTAAC	400

(2) INFORMATION FOR SEQ ID NO: 4067:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4067:

CCTCATTTCCA	GGAAGGAATG	TATTCTAAGA	GTGAAATAC	TCCGCGATTA	TTATTAAATT	60
ATGGAGCGGA	AGATAGGATT	TGCACCTATA	CCTCGTTCCG	GGAAGGAACG	TGTTCTAAAA	120
GTGGAACATAC	TCCGCGATAA	ACCTGGAGGC	GGCAACCGGA	TTTGAACCGG	TGATAAAGGT	180
TTTGAGACC	TCTGCCCTAC	CACTTGGCTA	TGCCGCCAAT	AACTGGGCTA	GCTGGATTGC	240
AACCAACGAG	TGACGGAGTC	AAAGTCCGTT	GCCTTACCGC	TTGGCTATAG	CCCATTAATA	300
ATAAGGGCGG	CTGAAGGGGA	TGCAACCCCT	GAATGTCGGA	ACCACAATCC	GATGTGTTAA	360
CCACTTCACC	ACAGCCGCCA	TGGCAGGGGC	AGTAGGAATC			400

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(2) INFORMATION FOR SEQ ID NO: 4068:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4068:

TATCTAATAG	TTTTACTTTA	AGTCCAGCAT	TCACAAAAAG	TGCTGCCAGT	TGAGCGCCCA	60
TTTGCTCTGC	GCCAAGAACG	GTTACTTTAT	TAATTGTCAT	AGTGATTCTT	CCAATTTAGT	120
TGAGGATAAG	ATAACCATTG	AGATAATTGG	AATAACGTTG	CTATTTTATA	AAATTAAATTA	180
AGTATCTTTG	ACAGTCATCT	TAGCCTCTTA	TTTAAGGAAA	AAGCTTTATG	CTTAAAAATA	240
GTCTTTTTTA	GTGAAATTA	TGCATCTCAT	ATAATTATTT	GCTATTTATA	CGAAAGCAGA	300
ATCTCCAGTC	AAAGCGCGTC	CAnTACTAAG	GCATTAAATT	CATGTGTACC	TGTCACGTGT	360
AAATCGnTTC	TGCATCAGnG	AGGAAACGTG	CAATATCATA			400

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(2) INFORMATION FOR SEQ ID NO: 4069:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 356 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4069:



5 AAAAAGAAGA ATTGAACGC CATATAAAGT AACGTTAAAT AATAACGAAA AAAGGGCACT 120  
 ATTCAAACAA TTACGGTATG TTGAAGGGTT TGAAAAATAT CTTCATAAAA ACTTCGTTGG 180  
 TGCAAAGCGT TTITCAATTC nCGGGGTAGA CGCACTTGTA CCGATGTTAC AACGTACTAT 240  
 TACGATTGCT GCGAAAGAAG GTATTAAAAA TATACAAATA GGCATGGCTC ACCGTGGGAC 300  
 10 GTTTAAACGT TTTTAAACGCA TGTnCTTAGA AAAAACCGTA CGAAATGATG ATTTcn 356

(2) INFORMATION FOR SEQ ID NO: 4070:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4070:

AAACGTTTAG GGAAATTAT CACACAGATA CAACAATACA CAGATATTGA TTACCCGATA 60  
 GCGATTGTCT TTCAAGCATC GTGTTTAAAC GAGTTTGTG TTAAGGGGCG TTAAAGTAAT 120  
 25 ATTATTTCAA AATTGCAACA CTATTCAATT GAGGCGAAAC CAGGTATATG TATTATAGGG 180  
 GAAGTTGTTG ATTATACTGA AAACACTCCT AAATCATATG ATCCTATGAA GCAATTTTAT 240  
 GTAGTAAGTG GTTCTAAACA TGACGCCCTT ATGCTCTGTG AACATTATAT GACGAAGGTT 300  
 30 ATGGCTGTTG CTAACCCCA ATGATACATC GAATGGGCAC CATTATCCAn TCGTCGCAAT 360  
 AATGGATTAC CCAAGGATGC CATTAnTTA AGCnGCCAn 400

35 (2) INFORMATION FOR SEQ ID NO: 4071:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 361 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4071:

CCTCTGGAAA CCTTAGTCAA TCGGTGGACG GGATTCTCAC CCGTCTTCG CTACTCACAC 60  
 CGGCATTCTC ACTTCTAAGC GCTCCACATG TCCTTACGAT CATGCTTCAA CGCCCTTAGA 120  
 50 ACGCTCTCCT ACCATTGTCC AAAGGnATnC CCACAGCTTC GATAATATGT TTAGCCCCGG 180  
 TACATTTTCG GGCATGTGC ACTCGACTAG TGAGCTATTA CGCACTCTTT AAATGGATGG 240  
 CTGCTTCTAA GCCAACATCC TAGTTGTCTG GgAACGCCA CATCCTTTTC CACTTAACAT 300

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361

(2) INFORMATION FOR SEQ ID NO: 4072:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4072:

ATGGTGACAA	AAACATCGCA	TTATTACTAG	GTGTCGGCAC	AGGCGTTTGT	GGTGCTGCTG	60
CTATTGCCGC	AGTCGCTCCA	ATATTCAAAT	CACGTGAAAA	GGATACAGCT	ATTAGTATCG	120
GTATCATCGC	ATTGATTGTT	ACGATATTTT	CACCTATATA	TACAGCTATC	TACGCTATCT	180
TTTCAATGAC	GACAAATGTT	TATGGCGCTT	GGTCTGGTGT	TAGTCTTCAT	GAAATTGnCA	240
CACGTTGTCT	TAGCTGGTGG	CTTTGGTGGT	AGTGATGCAC	TTAAAAATGC	ACTTCTTGTT	300
AAACTTGGTA	GGAGTATTCT	TACTGGATTC	CCATTAAACCA	TCGTACTION	TTTTAAATAT	360
GCGGTTnCCG	TnCATCAGG	AnTCATCTAG	GCAAGGGGTC			400

(2) INFORMATION FOR SEQ ID NO: 4073:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4073:

GCGACGATCA	TTTTAGAATC	CGCTTGGGCG	ATTAATTCCT	TAGAAGTGA	TGAGGCAAAA	60
TGTTTCATAT	CAGGACTION	AGCAGGTGCT	GATATGAAAG	ATGGTCTACG	TATTCATGTT	120
GAAGACATGG	GTACACTTTA	TACCAAAACAC	GTTGAATTGG	AAAACAAAGG	CGTCGACTTT	180
TATGAAGGTA	ATGAAGTGA	TGAAGCTGAA	GAAGAAGCAA	AAGCTTGGAT	TGATGCAGTT	240
GTAAATGATA	CTGAACCACT	TGTGAACCGG	AACAAGCAAT	GGTAGTTACC	AnAATCTTGG	300
AAGCGATTTA	TCCGCTGCCC	AAATCCAGGC	CAAAGCCATT	TACTTTGGAA	TAACATCnTA	360
CCGGTAAGGG	GGCnCATCCT	GGACCAAATT	TAAAAGTTGG			400

(2) INFORMATION FOR SEQ ID NO: 4074:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4074:

	TCTTCCTAAT ACCTTTCCAC GATCTTCAGC TGGCGCCTCT GCACTCGCAA ACGCACTTGA	60
10	TGCATCAACA ACACCACCAA ATAGTCCCTG CAATAACCTC ACAAGTACAA ACTGTAATGG	120
	TGTCGTACAC AATGCCATTA AAAATAAGCA TACCGCCAAA CCAAGTAACG CTCTTAACAC	180
	CATCCATTTT CGGTGATCT TATCACCTAG CTCCCCCAT ATCGGCGGAG TTATGCATCG	240
15	TGTTACAGC TGGAGCAGCA ATCGCTATAC CACTCCACan CTGTATTCT ACGGACTGAT	300
	AGGATTTTGT AGTAGTnCC ATGATGAAAT GGGCAATAAT GGGCACAAGT ACTGTTCACT	360
	CCAGCCAATC GTTATGAAAC TGGACTGGGG CCATAAAATG	400

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(2) INFORMATION FOR SEQ ID NO: 4075:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 380 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4075:

	GGTTCGAAC GTCGTATGnA GTTCGnTCCC TATCCGTCGT GGGCGTAGGA AATTGAGAG	60
	GAGCTGTCTT TAGTACGAGA GGACCGGGAT GGACATACCT CTGGTGTACC AGTTGTCTGTG	120
35	CCAACGCATA GCTGGGTAGC TATGTGTGGA CGGGATAAGT GCTGAAATC TAAGCATGAA	180
	GCCCCCTCA AGATGAGATT TCCCAACTTC GGTATAAGA TCCCTCAAAG ATGATGAGGT	240
	TAATAGTTT CGAGGTGGAA GCATGGTGAC ATnTGGAGCT GACGAATACT AATCGATCGA	300
40	AGACTTAATC AAAATAAATG TTTGCGACA AATCCACTTT TACTTACTAT CTAGTTTGAA	360
	TGATAAATTA CATCCATATG	380

45

(2) INFORMATION FOR SEQ ID NO: 4076:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 380 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4076:

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TTTGCTAAT ACTCAGCCTT ACTGCTTAGA CGTGCAATCC AATCGCACGC TTCGCTATC 120  
 CTACTGGGTC CCCCCATCGA TTA AACGAT TATAGGTGGT ACAGGAATAT CAACCTGTTA 180  
 5 TCCATCGCCT ACGCCTGTC GCCTCAGCTT AGGACCCGAC TAACCCAGAG CGGACGAGCC 240  
 TTCTCTGGA AACCTTAGTC AATCGGTGGA CGGATTCTC AnCCGTCTTT CGCTACTCAC 300  
 10 AnCGGCATTC TCACCTCTAA GCGGTCCACA TGTCTTACGA TCATGCTTnA AGGCCTTAGG 360  
 AAGGTTCTTA CCATGGTCAA 380

(2) INFORMATION FOR SEQ ID NO: 4077:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 370 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4077:

GCAGGTCTGA CTCTAGAGGA TnCCCACGCG CGCAAGATT AAATCGAAGA AACCGCAAC 60  
 25 AGATTCTCTA AAATAGCGCG GCGAACACG AACATCAAA TAGTGACCT GCAGCTGGTA 120  
 ATGGTGTAGC ATCAACGCCA CCAAGTGCAC CAAGTGGCGA TACTGCACCA AATAATAATG 180  
 30 TTACGCAAAA TACCGCACCA AATAGTAATA ATGCGCCTGT ATCGACTACA CCACAAAGTA 240  
 CAAGCGCGGA AaAAGATGG TCAAAATTTT GTAGATATAA CAACAACACA AGTCAGCACA 300  
 GCTAACGAGA ACACACAAA CATTACAGAT AAAGATGTTA AATCAATGGA AGCGGCATTA 360  
 35 ACGGCTCTTT 370

(2) INFORMATION FOR SEQ ID NO: 4078:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 351 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4078:

AAACATTTTA TCAATGGCA GAAGGACATG TGCCAAGACC ACCAGCGATG GTTGAACAT 60  
 50 TGACTTATAT TAAAGATTT ATGAACCAAG TTGAGTCGA TAGCTAGTAT GAAACGTGTT 120  
 GTGCGCATGG GAACATACAA GCTTTGAAGA TGTGGTACTA CATGCGTTGG AATTAGGGAT 180  
 CGGTACTTTA TATGAAGACG TGCTGCTTCC ATTAAATGAG TGATGCGATT TTGGCATGA 240

55

TAAGAGGGGC CAACATTGT TAGAnATAAC AACGGTGGC TCTTTAanTG T

351

(2) INFORMATION FOR SEQ ID NO: 4079:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 400 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4079:

TTGAAGTAAC TAAATTAATA TTATGTTGTT CAATTAAAAA CTTCATACAA ACCTAATCTA 60

TTTGCACTCC ACCGCTAACA CCGAACACTT GTCCGGTGTG ATAACCTGAT TCTTCTGACG 120

CTAATAGCAC ATAAGTTCCA CATAACTCAA CAGGTTGACC TGCACGACCT AAAGGTGTTT 180

TTTGACCAAA TGTGGGAIT TTACTTTGAG GTTGTCACAC AGAAATTTGT AATGGTGACC 240

AGAATGGACC AGGCCTACA CAGTTCACCT TAATTCCTTT TGGTCCTAAT TCTTCTGAAA 300

AACTTTTAGT TAATGAAATA ATTGCTGCCT TTTGAAGGGG CATAATCCAT GAAGAATanG 360

GCCAGGGanT AAAACCTTGG AChAAAGAAG CCGTGGAAnT 400

(2) INFORMATION FOR SEQ ID NO: 4080:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 400 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4080:

TCGTTGGACA CAATCTGAAA AATAAATAGA TATAAATTCG CGAGATATAT TCGTATTTAT 60

AGTAAATTA AATAAAGAGA TTATATAACA CGAGGAGTAG TAAGTAGAA ATTGAGAAAA 120

TATATAGATC ACACCTTATT GAAGCCTGAG TCAACAGTGA CGCAAATCGA TCAATCATC 180

GATGAAGCGA AACATTACAA TTTTAAATCT GTATGTGTGA ATCCAACACA TGTAAATAT 240

GCAGCAGAGC GACTAGCTGA TTCAGAGGTG CTCGTTTGTG CGGTAATAGG ATTCCCATTA 300

GGTGGCTOGA CACTGGCAA CGAAAGCATT TGAACAGAA GATGCAATTC AAAATGGTGC 360

AGATGAATTG GACATGTGCA TCCACATCGG CGCATTAAAA 400

(2) INFORMATION FOR SEQ ID NO: 4081:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 359 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4081:

CGACTAGTGA GCTATTACGC ACTCTTTAAA TGATGGCTGC TTCTAAGCCA ACATCCTAGT 60  
10 TGTCGGGCA ACGCACATCC TTTTCCACTT AACATATATT TTGGGACCTT AGCTGGTGGT 120  
CTGGGCTGTT TCCCTnChG AACACGGACC TTATCACCCA TGTTCTGACT CCCAAGTTAA 180  
ATTAAATTGGC ATTCGGAGTT TGTCTGAATT CGGTAACCCG AGAGGGGACCC CTCGTACCAA 240  
15 ACAGTGCTCT ACCTCCAATA ATCATCACTT GGAGGCTAGC CCTAAAGCTA TTATCGGAGA 300  
GAACCAGCTA TCTCCAGGTT CGATTGGAAT TTCTCCGChA CCCTCAGTTC ATCCGCTCA 359

20

(2) INFORMATION FOR SEQ ID NO: 4082:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 379 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4082:

TTTGACATTT AGTGTAGCG TnTTACAAAT AAAGCGTGT GTTTTGAAT TAAATGCATT 60  
30 TCACATTAGT ATTCATATTA TTTTtaggag GAATTTATAT GACATTTGAA AAAGAAACGG 120  
TCTAAAAAC ATTATTTCTT GAAGATGTAC TTAGTATTGC TAAAGGTTTA ACAGACGGTG 180  
35 AAGTCGAATT TTTACAACAA GTAGATTCAT TGGCTAGAAA GTAAGTACCG TGGAAAATAT 240  
TAATCAACAT TGGATAGACG CTACTGTACC CGAGGACTAT TTTAAAGATC TGGGGAGAAT 300  
TAAATTATTT TAACAATCCA TTACTTTTACA AGGGATCGTC CAAACGCCAA AnGGCCTAGT 360  
40 CCAACTATTT nCAGTTTTT 379

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(2) INFORMATION FOR SEQ ID NO: 4083:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4083:

TTGAACAGC CAGAGGTGTT TTATACCCAG GTGTTTCAGA TATGTATGAT GCGAAACAAT 60

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TTGGAACATA TGGTCCTAAC AAAGATGTTG TAGGCATATC TACTCGTCTT ATTAGAGTGA 180  
 CATATGATAA TAGACAAACA GAAGATTITAA CTATTTTATC TAAAGTTAAA CCTGACCCAC 240  
 5 CTAGAATTGA CGCAAACTCT GTGACATATA AAGCAGGTCT TACAAACCAA GAAATTAAAG 300  
 TTAATAACGT ATTAATTAAAC TCGTCCGTGA AATTATTTAA GCCGATAATA CACCATTAAA 360  
 TGTnChCAAT ATTACChGG GTAGCGGGTT TTAGTTCGG 400

10 (2) INFORMATION FOR SEQ ID NO: 4084:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 15 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4084:

AGCATATCGT CGTTAGTAAC GTCCCTCATC GGCTTCTAGT GCnAGGSCAT CCACCGTCGG 60  
 CCCTTAATAA CTTAATCTAT GTTCCATCC TACAGGAAAC GCGTTAGTAA TCTTGAGAGT 120  
 25 GTTCTTTTGA ACATAGCGAT TATTTCTTAT GAATTCAAGC TTATTTAAAA CTCTTTATTC 180  
 ACTCGGTTTT GCTTGGTAAA ATCTATATTT TACTTACTTA TCTAGTTTTT AATGTACAAT 240  
 TTCTTTTITAG TCAAGCGCTC GCATAAGCAA TATCACTTTA ACCAAAAAAT ATTTGAATGT 300  
 30 TAAATAAACA TTCAAAACTG AATACAATAT GTCACTTAT TCCGCCATCT nCTGAAGAAG 360  
 ATGTnCCGA ATATnATCCT TAGAAGGAG GTGAGTCCCA 400

35 (2) INFORMATION FOR SEQ ID NO: 4085:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 40 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4085:

TTACTTATCT AGTTTTCAT GTACAATAA TGSTGGAGAC TAGCGGGATC GAACCGCTGA 60  
 CCTCTGCT GCAAGCAGG CGCTCTOCCA GCTGAGCTAA GCCCCAAAT AGGTATTAAA 120  
 TTAATGGTGG GCCTAAGTGG ACTGGAACCA CGACCTCAC GCTTATCAGG CGTGCCTCT 180  
 50 GAACCACTG GAGCTATAGG CCCATTAATT TGAATGAAC AAACATTCAA AACTGGAATA 240  
 CAATATGTCA CGTTATTCGG CATCTTCGG AAGAAGATGT TTCGAATAn ATCCnTAnGA 300

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AAGCATTTGT TCCACCTTC GACGGCTGAG CTCCTAAAAG

400

(2) INFORMATION FOR SEQ ID NO: 4086:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 361 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4086:

15 GTCATTGGAA ACTGAGnAC TTGAGTCAG AAGAGGAAAG TGGAATTCa TGtGTAGCGG 60  
 TGAAATGCGC AGAGATATGG AGGAACACCA GTGGCGAAAG GACTTTCTGG TCTGTAACTG 120  
 ACGCTGATGT GCGAAACGTG GGGATCAAC AGGATTAGAT ACCCTGGTAG TCCACGCCGT 180  
 20 AAACGATGAG TGCTAAGTGT TAGGGGGTTT CCGCCCCTTA GTGCTGCAGC TAACGCATTA 240  
 AGCACCCTCGC CTGGGGAGTA CGACCGCAAG TTGnAACTC CAAAGGAATT GACGGGCGCA 300  
 CAACGCTGGG AGCATGTGCT TTAATTGAA CCAACnATA GAACCTTACC AAATCTTGA 360  
 25 C 361

(2) INFORMATION FOR SEQ ID NO: 4087:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4087:

40 GACCTTGcAG GACTCGAACC TGCGACCGAA CGGTTATGAG CCGTTAGCTC TAACCAACTG 60  
 AGCTAAAGGT CCTAAATATA ATTTTACAAC TAATAAATAG TGGCGGTGGA GGGGATCGAA 120  
 CCCCCGACCT CACGGGTATG AACCCTACGC TCTAGCCAGC TGAGCTACAC CGCCTTATAT 180  
 AGTTTGTAAA TAATATGGTG GAGACTAGCG GGATCGAACC GCTGACCTCC TGCGTGCAAA 240  
 45 GCAGnCGCTC TCCAGCTGA GCTAAAGCCC CCATAAAATA TTACAGTATA TCGGGAAGAC 300  
 AGGATTCGAA CTGCGACCC CTTTCCCAAA CCAAGTGCTT TTACCAAGTT GGTACTTCn 360  
 GTATAATTTA ACGGGCCCGA TAGGAGTTCG GAACCTTAA 400

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(2) INFORMATION FOR SEQ ID NO: 4088:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

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(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4088:

AGCTATTATT	TTTGACAGAT	TCCATATCGT	TCAACAITTA	AATAGAGAAC	TTAATAAGTA	60
TCGTGTACAA	GTTATGAATG	AATACCGTAA	TAAAAAAGGA	CCTGATTATA	CAATTTTAA	120
GAATAACTGG	AAAGTCCTAT	TGATGGATAC	TAGTAAACCC	ATATTTAGTA	AATACAGATG	180
GAATAAATCT	TTTAAGGCTT	ATAAACGCTC	ATCTGACATT	GTAGGAATTC	ATGCTTTCAA	240
AAGACGATAT	ACTACGACAC	TCCTACGAAC	TTGTCCCAAG	GGATTACGGA	AAAGGCCCTA	300
AGGGTTATGT	TAATTGGCCC	TAAATTTATT	AAATGCGTTT	GAATTCAGT	TAGTTAAAAA	360
GTCTGTGAGT	GanGGGTGTA	TGGGAAAGTG	GTTAAAAATAT			400

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(2) INFORMATION FOR SEQ ID NO: 4089:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 374 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4089:

ATCGTTTTAG	ATAAGACGGG	TACATTACAA	ATGGTCGTCC	AGTCGTGACA	GATTATCATG	60
GTGACAATCA	AACGCTACAA	CTACTTGCTA	CTGCTGAAAA	AGAITCTGAA	CACCCATTGG	120
CAGAAGCCAT	TGTCATTTAT	GCAAAAGAAA	AGCAATTAAT	ATTAACCTGAG	ACAACAACAT	180
TTAAAGCAGT	ACCTGGGCCA	TGTTATTGAA	GCAACGATTG	GATCATCACC	ATATATTGGT	240
TGGTAAACCG	GAAATTAATG	GCTGACAATG	GATATTAGCT	TGCCTAAGCA	TATTTnnGGA	300
TGGATTTAAC	ACATTATGAA	CGAGATGGTA	AAACTGCTAG	CTCATTGCTG	TTGAATTATT	360
ncATAACCGT	ATCA					374

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(2) INFORMATION FOR SEQ ID NO: 4090:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 367 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4090:

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TTAATAACGT ATTAATAAC TCGTCAGTAA AATTATTAA AGCAGATAAT ACACCATTAA 120  
 5 ATGTCACAAA TATTACTCAT GGTAGCTGTT TTGTTGCGT TGTGACAGTA AGTGACGCGT 180  
 TACCAAATGG CGGAGTTAAA GCAAATCTT CAATTICAAT GAACAATGTG ACGTATACGA 240  
 CGCAAGACGA ACATGGTCAA GTTGTACAG TAACAAGAAA TGAATCTGTT GATTCAAAATG 300  
 10 ACAGTGCACC AGTAACAGTG ACACCACAnT TACAAGCAAC TACTGAAGGC GCTGTATTAA 360  
 TTAAGTT 367

(2) INFORMATION FOR SEQ ID NO: 4091:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4091:

TAATATTATA TTGCTAGTAG TTGACTGAAT GAAAATGCGC TTGCAACAAG CTTTTTTCAA 60  
 25 CTCTAGTCAG GGGCCCCAAC ACAGAGAATT TCGAAAAGAA ATTCTACAGG CAATGCGAGT 120  
 TGGGGTGTGG GCCCCAACAC AGAGAATTTC GAAAAGAAAT TCTACAGGCA ATGCGAGTTG 180  
 GGGTGTGGGC CCCAACACAG AGAATTTTGA AAAGAATTTC TACAGGGCAA TGGCAGTTGG 240  
 30 GGTGTGGGCC CCAACATGAG AGAAATTGGA TTCCCAATTT CTGACAGACA ATGCAAGTTG 300  
 GCGGGGGCCC CAACACAGAA GCTGGACGAA AATCCTTGAA CGAATGAATG TGGCAATTGG 360  
 35 CGGGGGCCCA ACACAGAAGn TGACGAAAAT nCTnGAACCA 400

(2) INFORMATION FOR SEQ ID NO: 4092:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4092:

GCATTTTICA TAACACAAGG AATTTCACAA AGTCCGGCTA CTGGATCACA AACTAAACCT 60  
 AATAAATTAC TTATCGTAA TGCCATAGCG TGCCCGGATG CTCTGGTGA TCCTCGGAAT 120  
 50 ATAGCTACTG CTGCACTGCG GGCATTGCA GATGCTGAAC CAACTTCAGC TTGGCAGCCA 180  
 CCTGTGTCAC CAGCTACACT TGCAATGTTT GCTACGACAC GCCCAACAAA TGCTGAAGTG 240

55

CCGGGAATGG TAACCGAGGG AAnCAGCTGT GGGCGTTGCA CAAATAATAC CCCATCGCAG 360  
 CATTTGACCT TCATTTGGTT GCAATGGGAA CCTTTGACTG 400

(2) INFORMATION FOR SEQ ID NO: 4093:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 354 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4093:

TGACTTACGT ACTGTTCAAC CAATCGATGT TGACACAATT GTAGCTTCAG TTGAAAAAAC 60  
 TGCTCGTGCA GTGTAGTTC AAGAAGCACA ACGTCAAGCT GGTGTTGGTG CAGCAGTTGT 120  
 AGCTGAATTA AGTGAACGTG CAATCCTTTC ATTAGAAGCA CCTATTGGAA GAGTTGCAGC 180  
 AGCAGATACA ATTTATCCAT TCACTCAAGC TGAAATGTIT TGGTTACCAA ACAAAAATGA 240  
 CATCATCGAA AAAGCAAAAG AAACCTTTAGA ATTTTAATAC ATTTTAAAG TTAACGAATT 300  
 AGCGTATTTT AGTCTCAITG ATTAANATGA AATGnGrTAA TTTACGGAAT CCTA 354

(2) INFORMATION FOR SEQ ID NO: 4094:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 351 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4094:

CGTTAACATG AAGTTACGTT CTTTATAAAA AAGATTATAA CGCGTTATTA ATCTTGTGAG 60  
 TGTTCTTTTC AACACTAGCG ATTATTCTT ATGAATTCAA GCTTATTAA AACTCTTTAT 120  
 TCACTCGGTT TTGCTTGTA AAATCTATAT nTTACTTACT TATCnAGITT TCAATGTACA 180  
 AATAATGGTG GAGACTAGCG GGATCGAACC GCTGACCTCC TCGGTGCAAA GCAGGCGCTC 240  
 TCCCAGCTGA GCTAAGCCCC CAAATAGGnA TTAATAATAT GGTGGGCCTA AGTGGACTCG 300  
 AACCACCGAC CTCACGCTTA TCAGGCGTGC GCTCTAACCA GCTGAGCTAT A 351

(2) INFORMATION FOR SEQ ID NO: 4095:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 384 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4095:

5 ATTGTTGCCA CTGGCACACC CGAAGATATT GCTCAGACAA AGTCATCATA TACAGGAAAG 60  
 TATTTAAAAG AAGTACTTGA ACGAGATAAA CAAAATACTG AAGATAAATA AGATTAAAAG 120  
 AAGTGAAGGA TGTTATAATT TATCCTTCGC TTCTTTTAT TAATTTAGTA ATGAATAGTA 180  
 10 GAAAGAAAAG ATGCGTAAAA AGAATTATGT TAAGATAGGG TCAATCTAGA GTAGTTAAAC 240  
 ATAAATCGAA CThGGAGTGG GACAGAAATG ATAAAGAATC ACTAATGATT TATTATGTAG 300  
 TGGTTCTTGT TCATTAGCCA CAGCTATTGT TGTACTTAAA AnTAGGTATG CCGAGTGTGA 360  
 15 CTCCTTGAGA GGAAATACTn ATTT 384

(2) INFORMATION FOR SEQ ID NO: 4096:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 387 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4096:

CTGCATCTTC ACAGGTTACTA TGATTTACC GAGTCTCTCG TTGAGACAGT GCCCAAATCG 60  
 30 TTACGCCCTT CGTCCGGGTC GGAACCTACC CGACAAGGAA TTTCGTACC TTAGGACCGT 120  
 TATAGTTACG GCGCCGCTT ACTGGGGCTT CGATTGTAG CTTCGCAGAA AGAGCCGACT 180  
 CCTCTTGAAC CTTCAGCAC CGGGCAGGCG TCACCCTGAT GACATCACCT TACGGTTTAG 240  
 35 CAGAGACCTG TGTTTTTGAT AAACAGTCGC TTGGGCTAT TCACTGCGGC TCTTCTGGGC 300  
 GTTAACCCTh AAAGAGCACC CCTTCTCCCG AAATThACGG GGTCAATTTG GCCGAGTTCC 360  
 TTAACGAGnA TTCGCTCGGT GCAACTT 387

(2) INFORMATION FOR SEQ ID NO: 4097:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4097:

CCACTCACAT TCACACATCG ATTCACACAC CGCACTCAGC ACTCAGnATA CCGCATTCAG 60

TCAGATAGCG ACTCAGATTC GGATAGCGAC TCAGACTCAG ATAGCGATTC AGATTCAGAT 180  
 AGCGATTTCGG ACTCAGACAG TGATTCAGAT TCAGACTCAG ATAGCGACTC AGATTCTGAC 240  
 5 AGCGATTCAG ACTCAGACAG CGACTCAGAC TCAGACAGTG ATTCAGATTC AGACAGCGAC 300  
 TCAGATTCAG ATnCGGACTC AGACTCAGAT AGCGACTCAG ATTCAGATAG CGATTCCGAC 360  
 TCAGACAACG ACTCAGATTC AGATAGCGAT TCAGATTCAG 400

10 (2) INFORMATION FOR SEQ ID NO: 4098:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 15 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4098:

TCGTACTCGA ACTACTTTGT ATTAAAATAG TTACAACGAT ACCTGCAATA ACACCTAATA 60  
 CTGGATTGTA TGTAATTTTG TTTAAAATAT CTCGTAGCCT GTCTCCTGCT GATGCTTGAA 120  
 25 GCCCGTCTCC CATGATTTTT AAGCCGTAAA GGAAAATACC TAAACACCT AAAAAGGAGA 180  
 AAATGACTTC TGTAACCGAC ATTTCCATTA TTTCACCTCA AATAAGCTTT ATATTAGAT 240  
 TATCGCTTAT AATTGTAAT TTAATGTTAA GATTAGGTAA AATTATTAA CAATATATGT 300  
 30 TATTTGTATA TGACTTGTA AATATCGTCA CTTATTATGT AAATTTTCAG TGGTGGnAAT 360  
 GGCCAGTTTG CCAAGCACTG GTTTGACCA n ATGnGGCAn 400

35 (2) INFORMATION FOR SEQ ID NO: 4099:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 350 base pairs  
 (B) TYPE: nucleic acid  
 40 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4099:

45 ATCCTTTCC ACTTAACATA TATTTTGGGA CCTTACCTGG TGGTCTGGGC TGTTTCCGGA 60  
 CCGAACACGG nACCTTATCA CCCATGTTCT GACTCCCAAG TTAAATTAAT TGGCATTCCG 120  
 AGTTTGTCTG AATTCCGTA CCCGAGAGGG CCCCTCGTCC AAACAGGGCT CTACCTCCAA 180  
 50 TAATCATCAC TTGAGGCTAG CCCTAAAGCT ATTTCCGAGA GAACCACTA TCTCCAGTT 240  
 CGATTGGAAT TTCTCCGCTA CCCTCAGTTC ATCCGCTCAC TTCAACGTA ATCGTTTCGG 300

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## (2) INFORMATION FOR SEQ ID NO: 4100:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 357 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4100:

TAGAACTGT TGCCAAACAG CATGCTTAAT TTCAATATCT TCITTGACTG CTCGATATA 60  
 TAAATCAGCA TCATCATTTA CCAAGTCATC ATCAAAATTA CCATATGTTA AATGACTCGC 120  
 TAGATTTAAG TCGAATAGTA GCGGCCGTTT CTTATCTGTA ATTTTATCGT AAGATTTTTT 180  
 CGCAATGAGA TTTGGATCGT TTTTGTCAC TACAATATCT AATAGTTTTA CTTTAAGTCC 240  
 AGCATTACAA AAAAGTGCTG CCAGTTGGAG CGCCCATTTG GCCTGCGCCA AGAACGnTA 300  
 CTTTATTAAT TGGTCATAGT GAnTCCnCCC ATTTAGTTGA GGGATAAGAT AACCAT 357

## (2) INFORMATION FOR SEQ ID NO: 4101:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 346 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4101:

TAACTCAGGC TGGGGACATA AATCAATATT CTATGCTCTA CGAATTATAT TGGCAGTAGT 60  
 TGACTGGnCG AAAATGCGCT TGTAACAAGC TTTTTCAT TCTAGTCAGG GGCCCCAACA 120  
 CAGAGAATTT CGAAAAGAAA TTCTACAGGC AATGCGAGTT GGGGTGAGGG CCCCACACA 180  
 GAAGCTGACG AAAAGTCAGC TTACAATAAT GTGCAAGTTG GGGTAGGGCC CCAACAAGA 240  
 GAARTTGGAT TCCCAATTTT TACAGACAAT GCAAGTnGGG GTGGGACGAC GnGATAAATT 300  
 TTGCGAAAAAT ATCATTTCTG TCCCACTCCC ATCAAAAGAA TGACAT 346

## (2) INFORMATION FOR SEQ ID NO: 4102:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 363 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

AATGATGAAA ATCAATTAGA CAAAGCAGGT AAATTAAGTG ATGTGCGTC ATTTAAGGAA 60  
 GCGATTACCA ATCAGAGATC ACAAAGTACA ACTGGTATCG GCGAAGGTAT TGCCATTCCA 120  
 5 CATGCCAAGG TGGCCGCAGT TAAGTCACCA GCTATTGCGT TTGTTAAATC TAAAGCAGGC 180  
 GTAGATTATC AAAGTTTGGG ATATGCACCC AGCACACTTA TTCTTTATGA TTGCAGCGCC 240  
 AGAAGGTGGC CCCAAACACA TTCTAGATGC TTTACTAAAG TTGnCTGGTA TTTTAATGGG 300  
 10 ATGAAAATGT ACGTGAGGAA ATnTTACAT GCCTTCATCA nCTGAAGAAG TACTAGCGAT 360  
 CAT 363

15 (2) INFORMATION FOR SEQ ID NO: 4103:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 20 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4103:  
 25 GAGTGCAGCG GATAACATTA AACCGACGAC AnCTTTTTTA TGTTcAGGTT TAGCTGTGTG 60  
 ATAAATTGCA AGTGCGGCAC CACATAAGCC GAACATCATC GTAATAAAAC GGCCTGACAT 120  
 AAAGCGTGAC ACACCTGAAT AATACTTCGT CACATCTGGA TCACCAAGTT GAGCAAAGAA 180  
 30 GATGTTCTGC GTACCTTGAA CTAAGTGCCC TTGACTTCT AAAGTACCAC CAAGTGCCGT 240  
 CTGCCAAAAC GGTAAGTAAA AAATATGGTG TAAACCGAGT GGACCTAACA ATCTTAAGAT 300  
 35 GAAGCCATAA rCAAAAGTAC CsgTTGGcAC CTGTTtTCGT TACAaATCCA CCAACATGtK 360  
 AaTGCCCGTT TGtATGGTTG GCCCAAnTGA nAACATCATA 400

(2) INFORMATION FOR SEQ ID NO: 4104:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 358 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4104:  
 AATTGAGAAT TTGTCGTAT TTGTAAATTG TATCCTGGCT TAAGTTGGCC AAAGTGCTTT 60  
 50 ATTTTTTTAA AGTATTTAAA AGTAAAATTA CATGTTAATA CGTATATTAA TTGGCGAGAC 120  
 TCCTGAGGGA GCAGTGCCAG TCGAAGCAGG GGCCCCAACA CAGAAGCTGA CATATAGTCA 180

55

CAAAAAATCT ATTATAGAA TTTTACAGTA ATGTGCCAGA TGGGCATAGC GACCCATTCA 300  
 ATACGAnTAT nTnGAnTAAAT AGAGAACAGC AGTAAGATAT TTTCTAATTG AAAATTAAT 358

(2) INFORMATION FOR SEQ ID NO: 4105:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4105:

GACGCGTTAC CAAATGGCGG AATTAAAGCA AAATCTTCAA TTTCATGAA CAATGTGACG 60  
 TATACGACGC AAGACGAACA TGGTCAAGTT GTTACAGTAA CAAGAAATGA ATCTGTTGAT 120  
 TCAAATGACA GTGCAACAGT AACAGTGACA CCACAATTAC AAGCAACTAC TGAAGGCGCT 180  
 GTATTTATTA AAGGTGGCGA CGGTTTTGAT TTCGGACACG TGGAAAGATT TATTCAAAAC 240  
 CCGCCACATG GGGCAACGGT TGCATGGCAT GATAGTCCAG ATACATGGAA GGAATACAGT 300  
 CGGTAACACT TCATAAACT GCGGTTTGTTn ACCATTACCT AATnGTCAAG GGTACGGCGT 360  
 TAATGTTTGA AGGTTCCCGT TCCAAGGTTT TTTCCGTTT 400

(2) INFORMATION FOR SEQ ID NO: 4106:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4106:

GAAGTTAAGC TCCTTAGCGT CGATGGTAGT CGAACTTACG TnCCGCTAGA GTAGAACGTn 60  
 TGCCAGGCAG TTTTTTAATC AAATTTTGGT TAAAAATAA AATGGACAAG ATAAAAAAG 120  
 TTATTGACTT AAATGTTAAT AAAATGTATA ATTAATTCTT GTCGGTAAGA AAAATGAACA 180  
 TTGAAAACGT AATGACAATA GTCAACGTT AATTCCAAA AACGTAAC TAAGTTACAA 240  
 ACATTATTTA GTATTTATGA GCTAATCAAA CATCATAATT TTTCATGGGA GASTTTGGAT 300  
 CCTGGGCTCA GGATGGAACG CTGGGCGGCG TGCCCTAATA CATGGCAAGT CnGAGCGAAC 360  
 GGGACAGAA GGCTTTTGCTT CTCTGGGATG TTAACCGGCh 400

(2) INFORMATION FOR SEQ ID NO: 4107:



(A) LENGTH: 343 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4107:

10 GATTGTGCCA GCCTTTTAAC CGAAATACAA CATCATCATT GACAATTGTG TGATTTGAAA 60  
 AATCTTTCTC TTCAATAAAT ACATACGTTT GCATCGTATG TGCTTTCATG TAACTCAATA 120  
 TTGGTTTAA ATGCATTTC AAGATTAAAT AATGTTTACT AGAACCTGCT GTCGCTACAA 160  
 15 GTCTATTAC CTGTACAGA AACGCATTGA CTGGAAGTAG ATCAACACAA TTTnnCAAAG 240  
 CACCAGGGAT GGAAAGCTTG AAAAATTGGA AAACCAATAA AAATCACATC AGCGTCGATT 300  
 AACGACGTCG TTAATTATATA TACATCTCCT GTAGTATCTA Gnt 343

20

(2) INFORMATION FOR SEQ ID NO: 4108:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 351 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4108:

30 ATACAAAACA CCAGGTGCTG AAGATAAACA ATCACAAGCG GCTACTGCTT CAGCAACTGA 60  
 ATTACCATAT GCAGTATTAG AAGCTATGGG TGGCAAAGCA AACATTAAAC ATTTAGACGC 120  
 35 TTGTATCACA CGTCTACGGT TGAAGTTAAC GACAAATCTA AAGTTGATGT TCCTGGTTTG 180  
 ANAGATTAG GCGCATCTGG TGTATTAGAA GTGGCAATA ATATGCAAGC AATTTTGGT 240  
 CCTAAATCTG ACCAAATCAA ACATGAAATG CAACAGATTA TGanTGGTCA AGTAGTAGAA 300  
 40 AATCCTACTA CTATGGAAGA CGATnAAGAC GAAACTGTTG TGGGTGGCA G 351

40

(2) INFORMATION FOR SEQ ID NO: 4109:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 367 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4109:

55 CCTTTTCAA AATCATTTGA TGATCGATA AATAGTACGT TGTCGTCTTG TTGGCGACAT 60

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CCAATCACGG CTCTAAGTA GTTCTTTTCT TCTATTAAAT AGCGACGnAT CACACCTTCT 180  
 GCGGCCACCAC GGAATAATAC ACCATGTGGG AGTACGACTG ChATGGTACC TTCATCGTCT 240  
 5 AAGGTAATGT ACCCTGTGGT TGAATAAAGG CAAAATCTGC TTTGGGATTT TGGCGCAACT 300  
 TTGCCCGTAA CCACTGAATC GTTCATCATT TTCAAATTTT TGAATChGCT GGTCACATTGG 360  
 CACTGTA 367

10 (2) INFORMATION FOR SEQ ID NO: 4110:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 15 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4110:

GTCGTCGGAT TGAAGGATGG AGTACTGTGC CATTTCGCAA AGACTGGCAA GGACCACCAC 60  
 GTTTGCAAAA CGGAACAAGT TGGTCTATT TTGCAACAGA CCAATGGAAA TATGAAGAGT 120  
 25 CAAATGTAGA TCGTTTAAAA TCTCCATTAG CTAACAACAGA GGAGTTAAAG CATCAACATC 180  
 CAGCTGATTA TAATGTTTTA GCAGCTAGAC TTGGTTGGTT ACCATCATAT CCACAATTTA 240  
 ATAAAAATAG TTTGTTGTTT GCAGAAGAAG CTAAGATGA AGGTATAGAT TCAAAATGAAG 300  
 30 CGATTTTGCC ACGTGCAATT GATGAAGTGA ATCAAAACCA AACACCATTT GCCATAnGAA 360  
 AATCCTGATT TGGAAAAGGA TCCTnCCAAA ATCCAnnATT 400

35 (2) INFORMATION FOR SEQ ID NO: 4111:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 40 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4111:

TCAGATGAAG CTAAGAGTAA AGGTATTACA TGTGCAAGTG CAGGTAATCA TGCTCAAGGT 60  
 GTTGCTTATA CAGCTAAAAA ACTTAATTTA AACGCTGTTA TCTTTATGCC AGTCACTACA 120  
 CCTTACAAA AGGTAAATCA AGTAAAGTTC TTTGGAAATA GTAACGTGTA AGTTGTACTC 180  
 50 ACTGGTGATA CATTTGATCA CTGTTTAGCT GAAGCTTTAA CTTATACAAG TGAACATCAA 240  
 ATGAACCTTA TAGATCCATT CAATAATGTT CATACAATTT CTGGACAAGG TACGCTTGCT 300

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AATTGGTGGT GCGGTTTAA TTCCAGTAT TAGTACTAAC

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(2) INFORMATION FOR SEQ ID NO: 4112:

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 362 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4112:

15

GCCCTTAATA ACTTAATCTA TGTTCCACC ATTTTATAA GTCAAACGCT CACATACGGC 60

TTCGTTTCA TTATTTTAAA TGCTCATTTA CATAAGTAAA CTCTGCTTTA AAATAATTTA 120

ACTCATTGTC TGCTAAACGT TTCTTTTAT AAAAAGATT AAACGCGTTA TTAATCTTGT 180

20

GAGTGTCTT TCGAACACTA GCGATTATTT CTTATGAATT CAAGCTTATT TAAAACTCTT 240

TATCACTCG GHTTTGCTTG GAAAACTCTA TATTTTACnT ACTTATCTAG TnTTCAATGT 300

ACAAATAATG GTGGGCCCAA GTGGACTCGA ACCACCGACC TCACGCTTAT CAGGGCGTGC 360

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GG 362

(2) INFORMATION FOR SEQ ID NO: 4113:

30

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 363 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4113:

CAGGTGTTT TCGAAAAAGT GAAGTATGGC GTCAAATGAT GTCAGATATA TTTGACACAG 60

40

ACTTAGTGGT TCCTGAAAGT TATGAAAGTT CATGCTTAGG TGCTGCGTG CTCGACTTTA 120

AAGCTGAGG TGACATTGAA GATTTTCAA TCGTTTCATC GATGGTCGGT GCCACAAACA 180

ATCATACGCC GATTGAAGAA AATGTCACGT TTTACCAAGA GATCGTATCC ATTTTATCA 240

45

ATTTAAGTCG TTCTTTAACA GAGAATTATG ACAAATTGCA GATTTCACG CCACATATCG 300

CTGAAATAAA ACnCCATAAA TACGnCACTC AAGCATCTTA GATAAAGTTG TnGGCCATGC 360

TAC 363

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(2) INFORMATION FOR SEQ ID NO: 4114:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 394 base pairs

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(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4114:

GGTCTGGGCT TGGTTCGGT TCTGGGTCTG GACTTGGTTC TGGATCTGGC GTTGGTTCCTG 60  
 GTTCTGGGTC TGGACTTGGT TCTGGGTCAA CCGGCGGCCC TGGAGTTGGG TCTTTCGGAT 120  
 TTAGTGTGA ATCACCATCA GCACCTCCAC CACCATAACG TACAACATTC TCATTATTCC 180  
 AACCGAAAAA ACTGTAGTCT CTATTGTGA CAGGATCAAC ATTTTCTTGA ATAACCTGAG 240  
 TTTTAAAGTT CTACCTGTA TTGTCGAAT GCCCTTCTAC TAATACTACA TATGTTTATG 300  
 TAATATCACC AAATAATAC TAGCTACATT GGATGCnCAT AATAGATCTA TTTTAAATGG 360  
 nCTGTACTCC TTAAGGTAGA GCATTGGACT GCAn 394

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(2) INFORMATION FOR SEQ ID NO: 4115:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4115:

GGCGATTATA TTA AAAAGCC AATTACAGAA TG TAGTGGTA ATGAAATATG CCAAGAATGG 60  
 CTGTATCACT TAGGTGTATC AACTGACAAA ATTGAAGACT TAGCAAAACA TGCATCTAAT 120  
 ACGATTCCCTG TTTATATGCC ATATATCACA TCTTATTTC TACGCGCTGC TATCGGCGAC 180  
 AGACCTTTAG TGTCCCGCA TCAATCTCAG AACTTAGCAT TTATTGGTAA CTTTGCCAGA 240  
 AACAGAGCGA GACACTGTAT TTACAACAGA ATATTGGTT CGTACTGCCA GGAAGCTGT 300  
 TTATCAATTA TAAATATAG ATCGTGGTAT TCCAGAAGTC ATCAATAAGT CCATTGGATC 360  
 TTnCGCGTn TTAATGGGAT GGCCATATAC GAACTGGAT 400

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(2) INFORMATION FOR SEQ ID NO: 4116:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4116:

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TTAAAGGGCG AAATAGAAGT GCCGGGCGAT AAGTCAATGA CACACGTCG AATCATGTTG 120  
 GCGTCGCTAG CTGAAGGTGT ATCTACTATA TATAAGCCAC TACTTGGCGA ATGTCGTCGT 180  
 5 ACGATGGACA TTTTCCGACT GTTAGGTGTA GAAATCAAAG AAGATGATGA AAAATTAGTT 240  
 GTGACTTCCC CAGGATATCA ATCCTTTAAC ACGCCACATC AAGTATTGTA TACAGGnAAA 300  
 10 TTCnGGGTAC GACAACCGA TTATAGGTTG TTAAGTGGGT TAGGTATTGA AAGTGTTTGG 360  
 GTCnGGGCGA ATGTTTTCCA ATTGGGTAAA AGGCCCATGG 400

## (2) INFORMATION FOR SEQ ID NO: 4117:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 389 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4117:

AATAAAAGG AACAAAACGA TGGCTATTGA TATGGACACA AATCATAAAT AGCTGCTTTG 60  
 25 TTCTTTTTT AATTATATA TTTAnAATAC ACATATTCAA GAGCCTCGAG ATATAAGTCA 120  
 ATGTACTAGG CCACACAATT TAATATTGAC AGTAATTACC CGAACGAAAA TGCGCCCGG 180  
 30 GGCCCCAACA TGGGGAATTT CGAAAAGAAA TTCTACAGAC AATGCAAGTT GCGGGGGCCC 240  
 CAACATAGAA GCTGGCCAAT AGTTAGCTTT CAATAATGTG CCAGTTGGGG TAAGGGCCCC 300  
 AACACAGAAG CTGGCCAATA GTCAGCTTTC AATAATGTGC CAAGTTGGGG TAAGGGCCCC 360  
 35 CCACCACAGG GAATTTGAA AGAAATnCT 389

## (2) INFORMATION FOR SEQ ID NO: 4118:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 371 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4118:

AGGTAGGACT CGAACCTACG ACCGATCGGT TAACAGCCGA TAGCTCTACC ACTGAGCTAC 60  
 50 TGTGGATTAA TATTATGCCT GGCAACGTTT TACTTAGCG GAAnTAAGTT GACTACCATC 120  
 GACGCTAAGG AGCTTAACTT CTGTGTTGG CATGGGAACA GGTGTGACCT CCTTGTATA 180  
 GTCACCAGAC ATATGAATGT AATTATACA TTCAAAATA GATAGTAAGT AAAAGTGATT 240

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ACATGTCACC ATGCTTCCCA CCTCGAACCT ATTAAACCTC AnCATCTTTG AAGGGGATCT 360  
TATnAACCGA A 371

(2) INFORMATION FOR SEQ ID NO: 4119:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 341 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4119:

GCACATTAG CCAGTTAGA GAAAGATTGA CCTAATCTAT CCAACCAATC AGCCGACCAT 60  
TGAAACAGTG GTGCTAATTG CGGTGAATAC ATTGACTAAT CGTCACCAA AACCACTGC 120  
AGCACTTAAT AGCTTGTAA ATACCGAAAC ACCCGTTGTA TTCATCATAT TAAAGAATCT 180  
TGAAGTACA CTGCTATTTT CAGCCCATn AAGCAAGCTT TGAGACGCTT CTTCATTCC 240  
TCTGAAATA CCACTAAAA ACgGnTGTA GCTCTGCATT GCAGTTTAA CAGTATTTAA 300  
ACCATTTGCA AGAGTTGTGA AGnTAGCGGA TTGATTTTGC T 341

(2) INFORMATION FOR SEQ ID NO: 4120:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4120:

GGTGTAGAAA AGCCAACACA GCTAGGGTAG TATCCACCA GCGCCTCCAC GTAAGCTAGC 60  
GCTCACGTTT CAAAGGCTCC TACCTATCCT GTACAAGCTG TGCCGAATTT CAATATCAGG 120  
CTACAGTAAA GCTCCACGGG GTCTTTCGT CCTGTGCGG GTAACTTGCA TCTTCACAGG 180  
TACTATGATT TCACCGAGTC TCTCGTTGAG ACAGTGCCCA AATCGTTACG CTTTCGTGC 240  
GGGTCGGAAC TTACCGGACA AGGAATTTG CTACCTTAGG ACCGTTATAG TTACGGCCGC 300  
CGTTTACTGG GGCTTCGATT CGTAGCTTCG CAGAnAACG CACTTCTGT TAAACCTTTC 360  
CAGCACCgGn CAGGCGTCA CCCTnATTAC ATCAACTTTA 400

(2) INFORMATION FOR SEQ ID NO: 4121:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4121:

AATAAACTCT	GCTTTATTCT	TTTTACAGT	AATATCTAAA	TGAGTTGGAT	ATTTAACCTT	60
CGCATTAATT	TCAATATTAA	ATTGCGTTAC	CGCGACAAGC	GCAAAACACAA	CATACATAAT	120
AAGATTGGCT	AAAAAGATAT	AGTTAAAGCT	AAATTCTGCG	ACAAAGCCGC	CCATTGCAGC	180
ACGCACAGCC	ACACCAATAT	TTTGCGCTAA	GTATATCGCA	TTAAACGTTT	GTCTTCGCC	240
ATTGGCCAC	ACTGCTCCAG	CCATAGCGTA	TATCGCAGGA	ATAATCATTC	CGCCACCAAA	300
CCCTAACATT	ACCAGGCCAT	ACCAGCATA	CCAGGCCAC	CCGnGGAAGG	AAATTAAGTA	360
GCGGTGTAC	TACCAAnGAC	CAGTGAAGG	TnCCAATTAA			400

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(2) INFORMATION FOR SEQ ID NO: 4122:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 362 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4122:

GATACTAAT	AAAGTTTAGT	TAAGTATTTT	AATAACAAGT	AGTATGTCAT	TCTAGTAGCT	60
AGAACAGATA	TACTACTTGT	TTGTTTTTGT	GGAAAATTGA	GTATATTCAA	AAGGATAAGn	120
ACGAGAATTT	CGTTATTAAA	CTACGAATTC	TCGATTTTTT	TATATTTTAA	GATAGTTTAA	180
TTTCTGAAAA	CTTAATAGAA	AGGGGTTTGA	CAAAGCTAAA	GTGAAGTTTG	ACGgTATAAA	240
CGCAAAITAA	ATATACTTTT	ATAGAAAATT	AACTCAGGCT	GGGACATAAA	TCAATATTCT	300
ATGCTCTACG	GAGGTATATT	GGCAGTAGTT	GACTGAACGA	AAnGCGCTTG	TnACCAGCTT	360
TT						362

45

(2) INFORMATION FOR SEQ ID NO: 4123:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 352 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4123:

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CGCGAGGTGG TTTACAAGGA TTGTTGACAT TTCAAGACTT ACCAGTAACA AGTTATACAA 120  
 TCTGGGGTGG TGTCTCAGAT ATTGATTAA TGTATGAAGA ACGTGCAT TTAAGAGGCA 180  
 5 TGCTACGAAG AATGATTGGT CATCCGAAAA AAGATCGAGC GGGCATATGA GGCACGCCAA 240  
 GCGATTCCAA ACATTATGA TAACAGTCCG CCAATATTAA TTGTACATnG GAGGGGAAAG 300  
 10 ACCCAGCAAG TTGGGTATTn CATCATGCGT ATTATTTTAA GCGACCAAC TA 352

(2) INFORMATION FOR SEQ ID NO: 4124:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 15 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4124:

AACCAGTGA TCTACCTTG GTCAGGTGA AGTTCAGGTA ACACTGAATG GAGGACCGAA 60  
 CCGACTTACG TTGAAAAGTG GAGCGGATGA ACTGAGGGTA GCGGAGGAAA TTCCAATCGA 120  
 25 ACCTGGAGAT AGCTGTTCTT CTCCGAAATA GCTTTAGGGC TAGCCTCAAG TGGATGATTA 180  
 TTGGGAGGTA GAGCACTGTT TGGACGAGGG GCCCTCTTTC GGGTTTACCA ATTTCAAGACA 240  
 AACTCCGAA TGCCAATTAA TTTGAACTn GGAGTTCAGA ACATGGGTGA TAAGGTCCnT 300  
 30 GTTTCGAAAn GGGAAACAGC CCAGACCACC AGTTAAGGTC CCCAAATGTA TGTTTAAGTG 360  
 GAAAAGGGTT TTGCGTTGC CCCGACAACT AGGATGTTGG 400

35 (2) INFORMATION FOR SEQ ID NO: 4125:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 40 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4125:

45 GGCTTATTAA TCAAAAAATT TATAAAGAAT ATGTAGAAAA CTITTATTITA CATCGAGGCT 60  
 ACACGCTACA ACAGAAAAAT AAAATTTTAA TTAGCTTATA CATGTGAATA GGTITTTTCAA 120  
 TTTATATGGT GGATGTTCTT GCAGTCCGTG TAGGATTAAT CATAATGGTT ATCATACAAA 180  
 50 CCGCTGTACT CTTTACATT GTAAAAACAT TACCCAAATC AAATCATAAA ATAGAGGAGT 240  
 GATTGCCCAT GTTTATGGCA GAAAATAGAT TACAATTACA AAAAGGCAGT GCGGAAGAAA 300

55



TTGTCATAA AACATTAAAT ACCGGGATAC AGCCGAGTAA

400

(2) INFORMATION FOR SEQ ID NO: 4126:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4126:

AATCTATATT TTACTTACTT ATCTAGTTTT CAATGTACAA TTTCTTTTITA GTCAAGCGCT 60  
 CGCATAAGCA ATATCACTTT AACCAAAAAA TATTGAATG TTAATAAAC ATTCAAAACT 120  
 GAATACAATA TGTCACATTA TTCGCGATCT TCTGAAGAAG ATGTTCCGAA TATATCCTTA 180  
 GAAAGGAGGT GATCCAGCCG CACCTCCGA TACGGCTACC TTGTTACGAC TTCACCCCAA 240  
 TCATTGTGCC CACCTTCGAC GGCTAGCTCC TAAAGGGTT ACTCCACCGG CTTCCGGGTG 300  
 TACAAACTCT CGTGGGTGTG GACGGGGCGG TGTGGTACAA nGACCCGGGG AACCTnATTC 360  
 AnCGGTAGCA TGGCTGGATC TAACGATTTA CTAnCGGAT 400

(2) INFORMATION FOR SEQ ID NO: 4127:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4127:

CGAAATTGT AGTAAAAAGAT GTGCAACCAG CGAAACCAAC TGTGACTGAA ACAGCGGCAG 60  
 GAGCGATTAC AATTGCACCT GGAGCAAACC AAACAGTGAA TACACATGCC GGTAACGTAA 120  
 CGACATACGC TGATAAATTA GTTATTAAAC GTAATGGTAA CGTTGTGACG ACATTTCAC 180  
 GTGCAATAA TACGAGTCCA TGGGTGAAAG AAGCATCTGC AGCAACTGTA GCAGGTATTG 240  
 CTGGAACATA TAATGGTATT ACTGTTGCAG CAGGTACTTT CAACCTGCT GGATACAAAT 300  
 CCAAGTTGGT TGCAACGCCA AGGAAGCGGA GAGACCACTG AAGTGATTGA GCCACCGTAA 360  
 TGGTTGGnTT CCCAGTTTG TCGGCAnCCA CAACCGGAAC 400

(2) INFORMATION FOR SEQ ID NO: 4128:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4128:

	GATTAGTGAA AAGTTGGTIG TACTATTACC GTTAAAAATT GGAGATTATC TGTGCTCTTC	60
10	AAGTATGCGT TCATTAAITG ATATTGGCGC ACCGTATAAC CATGTCAAAG TACCATTTGC	120
	AATGCAGTCA TTAGGCGCAT TAAGGCTAAC GCCTACGCGT TACATGAAAA ACGGAGAACA	180
	AGCAGAACAA TTATTAGCTC AGCTTATAGA AAAAGATGAA GCCTAGCTA AGTATGTCAT	240
15	GGGTGTGAT GAAACAGCTT GGTGGTCATA TATGGGTCCA GATAATGATA TTTTCCAAGA	300
	TCCATTAnGG CCATCTAACT GTTCCAGCTA AGGAAAGTAT CCCCGAAGTG GCTAAGCCCA	360
	AAAATGATTA CGCCAACAG CTAGTGGTCC ATnGGCCAGC	400

20

(2) INFORMATION FOR SEQ ID NO: 4129:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 374 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4129:

30	AGAGGTCGGT TGCCTTACCG CTTGGCTATA GCCCAATATA TAGATGnGG AGGGGGGCG	60
	ATTGAACTG CGAACC CGA AGAGCGGATT TACAGTCCGC CGCGTTTACC ACTTCGCTAC	120
35	CCCTCCAGCT TATTATATA ATTAAATAAT CAAAATGGTG GAGAAATGAC GGTTCGAACC	180
	GCCGACCCTC TGCITGTAAG GCAGATGCTC TCCCAGCTGG AGCTAATCT CAAAATAAT	240
	GACTCCTGAC GGGACTCGAA CCGGTGTAC CGCCGTGAAA GGGCGTGTTC TTGAACCGCT	300
40	TGGACCAAGG GAGCCATGCG TCACACAGGT GAGGGACTCG AACCTnACGG ACCGATTGG	360
	TThAACAGCC GGAT	374

45

(2) INFORMATION FOR SEQ ID NO: 4130:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 431 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4130:

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ATTAAATTC AGTGTGTGCA ATTTCTTCAT CTGTAGGTAC ATCATCGTTA AGGCCAACAA 120  
 5 GTGCTTCAGA AACATTTCGT GAATGATAAC CGATACGTTT AAGAACrCsA ATCATATCGA 180  
 TATATAGTAA TCCGCTTTT GTTGTACATT CACCACGATT AAGGCGTTTA ATATGACCTT 240  
 TCGGTAGTTT ATGTTCAATA TTAATGATT CTCTACTACG TTCTACAATT TCATCTTTT 300  
 10 TCGTTTGTG ATAAACATCT AACATGTCGA TGGCTTTATC AAATGACTCA GCAACATGGT 360  
 TGGAAATAaT TATCCATACC GCGTTGTGCA TCTnCTGGTA ATGCGAATAT CTTCATCATG 420  
 TTGGCGGTTT T 431

15 (2) INFORMATION FOR SEQ ID NO: 4131:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 20 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4131:

25 TTTAGTTGAA GCGCGTGTG TCGCATTGTC TGTTTGTTC GGTGCTTCTA CTTTAGTTGA 60  
 GGGCGGTGTT GTGCGTTTG GTTTTGATTG CGGTGCTTCT ATTTAGTTG AGGCGGTGT 120  
 30 TGATGTGTG CTTCCACTTT AGGnAaTGA GTGTGTGCG GTTTGCTGCT TCGTGTGTCG 180  
 TTGTGATTAC ACCTGTGTG AAAAGGCCTA GTGTAACAT TGTTTAGCA ATCGTTGTTA 240  
 TTTTCATAGT TGTATGCTCC ATTCGTAAT ATTAGATTG TCGATACAT TCATGTAATC 300  
 35 ATACAGCTTT ATTATAGAGG CGTATTGCTC CATTACATT AAACCTGTnT AACCAGATTG 360  
 GAAGCAGCGT TGAATnAAAT GAAGAAAGCC AGAAGTTCGT 400

(2) INFORMATION FOR SEQ ID NO: 4132:

- 40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4132:

50 CCATTCAGT TAGTCTTTG GCCACCACCT TGACGTTGTT GTTGCTGTTG TTGATTTTGA 60  
 TTAGCTTGT GTTGATTTTG ATTATTTTGT GCTTGATTGT TCGCTTGATT AGCGTTGTTT 120  
 TGATCATTAT CAGATTATC TTTAGTCGCT TTGTCCTGAT CCTCTTTTGA TTTATCACTG 180

55

TCAGCAITAT TTTTATTGT ATTCGGGATT TTATTTTCTT TTGTACCAIT ATTATGATTG 300  
 TTTAATGCCA TGCCCTCCAAA TATCGCTAAA TGCACCGATA AATnAGTACA GCTGCAATGA 360  
 ATGGTAACAA TACTTTGGGC CAGnCACCGT TTTTACGGTn 400

(2) INFORMATION FOR SEQ ID NO: 4133:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 417 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4133:

TTGAATACCTT TTCTCCACA CAAATGATA TCTATTGGCA TTAGCTTCTA CTTTGTGACC 60  
 ATCAATAAAA ATTGAATTAT TATCAATAAG ATTTTGCTTT AAACATTGAC TATGGAAC TG 120  
 AATAAATAAA GATTCAATTA ACGCATCAGT ATTAGGATTC ACTCTAAAAC GATTAATAGT 180  
 TTTATAAGAA GGTGTTTGAT TTGAGCTAA CCACATCATT CGAATACTGT CATGAAGTAA 240  
 TTTCTCTATT CTTGACCAG AAAATACAGA TTGAGTATAT GCATATAAGA TGATTTTAA 300  
 CATCATTTTT GGGATGATAG GATGTTGCGC CACGATGATG TCTGAATTCA TCGAATTCCG 360  
 TAnCGGGTAC CGTCCACCA ATTCCATTAA CATATCGCGG AATATCATTT TGAGGAA 417

(2) INFORMATION FOR SEQ ID NO: 4134:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 354 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4134:

GGTTTAATAT GGACCTTTGC CGTnTTTATG TTCAATATTA AATGGATTCT CTACTACGTT 60  
 CTACAATTTC ATCTTTTTTC GTTTTGTGAT AAACATCTAA CATGTCGATG GCTTTATCAA 120  
 ATGACTCAGC AACATGGITG nAATAATTTA TCCATACCGC GTTGTGCTTC TTCTGTAATG 180  
 CnAATATCT TCATCATGTT GGTCGTTTTA ATTGAGCGAC ATACTCTTCT GTTAGCTCTG 240  
 CTACTTTTAA AATAGAGCGA TTGACATCAA ACATAACTGC TAAACGCTCA ACGTCTGCTT 300  
 TCGTAATGGC TTTTGTAGAA ATTCTAACTA AATAATTTCG AATGCTATCA TTGT 354

(2) INFORMATION FOR SEQ ID NO: 4135:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4135:

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10 CTGGGATCGC CACCTTTAAG TCTAACAAACC TTGTTATATC GACGCGTGTC TTCCACGATA      60
   CAGTCATTTA TTTTTCCTTG CTGAATATGT TTTGCATACG GCTTTTACC AACATCGATA      120
   ATTTCAGTAG TCAAAITCGC ATATTGTAAA ATTAACGGAT TCACTAATCG ATCATATAGA      180
15 ATGACATCCG CTTACAGTAT TAAACGCTCA GCCTTTTTCG TCAATAATT CGGATTACCT      240
   GGACCCGCAC CTATCAAGTA AACCTTGCCA TATTCTCTTA CAGACATATA TATACGGTCC      300
20 CGTCTGTAAC TTCTACTCTA TAAACATCTA CACACCTTC ATCAGGTCTG GACAATACCT      360
   GnATTAAACA ATTTTGTATC GTGGGGGGGC AAATACATAT      400

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(2) INFORMATION FOR SEQ ID NO: 4135:

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25 (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 348 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

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30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4136:

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35 ACCACTGAAT CGTTCATCAT TTTCNAATTT TGAATCTGCT GTCCATTTTCG CACTGTATGG      60
   TGGGTTGCAC ATAACCGCAT CAAATGTATT GCCTAAAAAG GCTGGATTTC CCAATGTGTC      120
   ATCATTACGG ATCTCGAAGT TCTCATAACG CACATCATGT AATAACATAT TCATGCGTGC      180
40 TAAGTGTAT GTAGTATTGn TACGTTCTTG TCCGAAATAA CGATACACTT GCGTTTCTTT      240
   ACCAACACGT AACACAATG GAACCGGAnC CACATGTTGG GTCGTACACG TGGACGTAAT      300
   TTATCnTTAC CGTGCCTGTA CAATCTTCGC CAGTATCTTA GATACTTG      348

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(2) INFORMATION FOR SEQ ID NO: 4137:

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45 (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 362 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

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50

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4137:

55

TGGACAATAC AAAGGGCAGC GAAACCGCGA GTCAAAGCAA ATCCCAATAA GTTGTCTCA 120  
 GTTCGGATTG TAGTCTGCAA CTCGACTACA TGAAGCTGG nAATCGCTAG TAATCGTAGA 180  
 5 TCAGCATGCT ACGGTGAAAT ACGTTCCCGG GTCTGTGACA CACCGCCCGT CACACCACGA 240  
 GAGTTTGTA CACCGAAGC CGGTGGAGTA ACCTTTTAAG GAGCTAGCCG TCGAAAGTGG 300  
 10 GGACAAATGA TTGGGGTGAA TCGTAACAAG GTAAGCCGTG ATCGGnAAGG TCGCGCTGGG 360  
 AT 362

(2) INFORMATION FOR SEQ ID NO: 4138:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 384 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4138:

ACATATCGAT AACATGACAT AACTCATGCT GGGTTTCCCC ATTCGGAAAT CTCTGGATCA 60  
 25 AAGCTTACTT ACAGCTCCCC AAAGCATATC GTCGTTAGTA ACGTCCTTCA TCGGCTTCTA 120  
 GTGCCAAGGC ATCCACCGTG CGCCCTTAAT AACTTAATCT ATGTTTCCAC CATTTTATA 180  
 30 AGTCAACGC TCACATACGG CTCGTTTTT ATTATTTTAA ATGCTCATTT ACATAAGTAA 240  
 ACTCTGCTTT AAAATAATTT AACTGCATTG TCTGCTAAAC GTTTTCTTTT ATAAAAAGAT 300  
 TTAACCGGT TATTAATCTT GTGAGTCTT TTTCAACAC CAGCGATTAN TTCnTGAGGA 360  
 35 ATTCAGCCT AntTAAACC CTTA 384

(2) INFORMATION FOR SEQ ID NO: 4139:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4139:

CTCATTATGG GACGTGCACA AGATGGTTTT CTGATCAAG ACAATATGA CATTATTTTC 60  
 50 AAAACAGCTG AAAATTAGA CGTACCGATT TATCTACATC CCGCGCAGT TAACAGTGAC 120  
 ATTTATCAAT CATACTATAA AGGAAATTAT CCTGAAGTAA CTGCGGCAAC ATTGCTTGT 180  
 TTTGGTTATG GTTGGACAT TGATGTCGGC ATTCATACAA TACATCTnGT nTnATCTGCT 240

55

TCCTTAGAAC GAATGGATGA AGCTTATCCG TGAACATTTG AACCACCCCG GAAGCAATAC 360  
 TTAAAAATAA ATTtAnTATC ACACCGGGTG GCATGGTACC 400

5 (2) INFORMATION FOR SEQ ID NO: 4140:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4140:

CAACCACATT CGCTCGGCTC ACCTTAGAAT TCTCATCTTG AACTACCTGT GTCGGTTTGC 60  
 GGTACGGrCA CCTATTTTCT ATCTAGAGGC TTTTCTCGGc AGTGTGAAAT CAACGaCTCG 120  
 20 AAGACTCAAT GTCTTCTGCC CATCACAGCT CAGCCTTAAC GAGTACCGGA TTTGCCTAAT 180  
 ACTCAGCCTT ACTGTTTAGA CGTGCAATCC AATCGCACGC TTCGCCTATC CTACTGCGTC 240  
 CCCCCATCGA TTAACACGAT TATAGGTGGT ACAGGAATAT CAACCTGTTA TCCATCGCCT 300  
 25 AAGCCTGTGC GGCTCAGCTT AAGGACCCGA CTAACCCAG AACCGGAAGA GCCTTCCTCT 360  
 GGAAAACTT AGTCAATCG TTGGACCGGG ATCTCAACCG 400

30 (2) INFORMATION FOR SEQ ID NO: 4141:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4141:

40 CATATCGATA ACATGACATA ACTCATGCTG GGTTCGCCCA TTGCGAAATC TCTGGATCAA 60  
 AGCTTACTTA CAGTCCCCA AAGCATATCG TCGTTAGTAA CGTCCTTCAT CGGCTTCTAG 120  
 45 TGCCAAGGCA TCCACGTCG GCCCTTAATA ACTTAATCTA TGTTCCACC ATTTTATAA 180  
 GTCAAACGCT CACATACGCG TTCGTTTCA TTATTITAAA TGCTCATTTA CATAAGTAAA 240  
 CTCTGCTTTA AAATAATTTA ACTCATTGTC TGCTAAACGT TTTCTTTTAT AAAAAGATT 300  
 50 AAACGCGTTA TTAATCTGT GAGTGTCTT TCGAACATAG GCGGAGTATT TCTTAAGGAA 360  
 TnCAAGChTA TTTAAACCTC TTAATCACnT GGTTTTGChT 400

(2) INFORMATION FOR SEQ ID NO: 4142:

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(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4142:

10	GTTCGCGCTCT TTCTCGTTT CGTCAGATTC AAACGTTTTC ACTTCGCCAA GCCATTTTTC	60
	TTTGTGTTTA CTTTTATT TTGACGTTTGA GACATAAAAA AAGAGACCTC ACGGTCTCAA	120
	CTTGCGCTGGC AACGTTCTAC TCTAGCGGAA CGTAAGTTGG CTACCATCGT CGCTAAAGAC	180
15	CTTTCTTGAC TTGTGACAAAT CGCTTGCTTC TTTCTCTCC TTGGCTCTC GCTTACTCAT	240
	TTAGCTCTAC TAAACTCGTT GCGCTCTTTT CTCGGTTCGT CAGATTCAAA CGTTTCACTC	300
	GCCAAGCCAT TTTCTTGGG TTACTTTTAA TTTGACGTTT AAGGCATAAA AAAAAGAGAC	360
20	TTGCGGGCTC AAATGCGGnT CATCGCATCC ATTTTnGnCh	400

(2) INFORMATION FOR SEQ ID NO: 4143:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 369 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4143:

	TTTAAATTG ACATTATTAC TGACCAAAACA AGTGACATG ATCCGCTAAA TGGATATGTG	60
35	CCACAAGGAA GCGAAAGTAT TGCCTGAAAA AGATCCGAAA AAATATGTTG AACTGTCACA	120
	AGCTTCAATG GCAAAGCATG TTGAATTAAAT GCTTGAATT CCAAAAAAGT GCGCTGTAG	180
	CATTGATTA TGGTAACAAT ATTCGTCAAG TAGCCTTCAA TAACGGAnGn ATAAATGCTT	240
40	TTGGACTTCC CAGGTTTTGT ACCAGCTTAC ATTAGACCAT ThATTCTGTG TAGGTTAAAG	300
	GGCCATTCGG CTTTGTCTGG TTGGAGTGTG GGATCCAAAA GATATCGAGC GTGCCGGATG	360
45	GAGGAAATG	369

(2) INFORMATION FOR SEQ ID NO: 4144:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 370 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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	GGAAAGATAA ATAGCTTCAT CAATGTCATG CGTCACTAAA ATAATAGTIG ATTGCGTTTT	60
	ATGTTTTAGT TGCAGTAGTT GATCCTGAAG TTTATAACGT GTAAATGCAT CTAATGCACC	120
5	TAATGGCTCA TCCATCAATA TAACGTTAGG CTTATGCACA TGCCTCGAC ATAGTGCCAC	180
	ACGTTGTTTC ATACCCCCGG ACAGTTGCTC GGGAAAATGC TTTCCTCTGT CTTCTAAATC	240
	AACTAATTTA AGCTGTGcHt TAATCTCTTC ATCACTAATT TTCTGTTGTA ATCCAATCCT	300
10	AATGTTGTCA TTAATCGTTT TCCAGGCAGC AAATTATGGT GTTGAAATAG CATAAACAAn	360
	CGGAGnGGC	370

15 (2) INFORMATION FOR SEQ ID NO: 4145:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 370 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4145:

25	CGAGGTAGCA AAGAACAAT TGCGAATAT GTACCTAAAT TACAGTCACA TGAAGTGGT	60
	ACATGCTTTG CTTTAACTGA ACCAGAACAC GGTTCGGACG TTGcHGGAGG TCTTGAAACA	120
30	GTGCTGAAC GCCAAGGCGA TACTTGGGTT ATCAATGGTG AAAAGAAATG GATTGGTGGT	180
	GCACATGTAT CTGATGTCAT TCCAGTATTC GCAGTAAATA AAGAAACTGG GCAAACCCCA	240
	TTGCTTTGTA GTCAGACCAG AACAAAGATGG GCGTCGATAT TGAAGTCATT GGATAATAAA	300
35	ATCGCACTTC GGCATTGTTT CTAACGCCTT AATTThAATT AAnTAATGTT CAAAGTAGGA	360
	TTGAAGCGGG	370

(2) INFORMATION FOR SEQ ID NO: 4146:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 380 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4146:

50	TGGGGTGTTT TTACCAATAA AGCGTTGCAA GGTGGCGGTA GTTTAATCGA TTATGGTTGC	60
	CACTTGTAG CTACTAGGTA AAGATATGGT GCCGCATGAA GTCTAGGAAA AACATAATAAT	120
	CAATTGAGCA AACAAACCGAA TCAAAATTAAT GATTGGGGAA CAITTGATCA TACTAAATTT	180

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GAATGTTGCT GGTCTGCAAA TATCAAAGAA GATAAGGTTT ACGTnTTTT ATCAGGAGGA 300  
 GGATGGCGGT ATCCAATTIA TTTCATTG GAAATATATG GnCCCCCGTT TTGGGAACn 360  
 5 ATTTTTTGA AAGCCAAGCT 380

(2) INFORMATION FOR SEQ ID NO: 4147:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 362 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4147:  
 TACTTATCTA GTTTCAATG TACAATTTCT TTTTAGTCAA GCGCTCGCAT AAGCAATATC 60  
 20 ACTTTAACCA AAAAATATTT GAATGTTAAA TAAACATTCA AAAGTGAATA CAATATGTCA 120  
 CATTATTCCG CATCTTCTGA AGAAGATGTT CCGAATATAT CCTTAGAAAG GAGGTGATCC 180  
 AGCGCACCT TCCGATACGG CTACCTTGTT ACGACTTCAC CCCAATCATT TGTCACCT 240  
 25 TCGACGGCTA GTCCTAAAA GGTTACTCCA CCGAnTCGG GTGTACAAA CTCTCGTGGT 300  
 GTGACGGGCG GTGTGTACAA GACCCGGGAC GTATTCACCT GGCAGCTTn CTGGGTTTAC 360  
 nT 362

(2) INFORMATION FOR SEQ ID NO: 4148:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4148:  
 CACCATACAT GCGAAATGGA CAGCAGATTG AAAATTGAA AATGATGAAC GATTCACTGG 60  
 TTACGGCAAG CTTCGCCCAA AATCCAAAGC AGACTTTGCC TTTATTCAAC ACATGGTACA 120  
 45 TTACCTAGAC GATGAAGGTA CCATGGCAGT CGTACTCCCA CATGGTGTAT TATTCCTGG 180  
 TGCCGCAGAA GGTGTGATTC GTCGTATTT AATAGAAGAA AAGAAGTACT TAGAAGCCGT 240  
 GATTGGGTTA CAGCCAATAT TTTCTATGGG nCAAGTATTC CAACATGTAT TTAGTATTAA 300  
 50 AAATGTGCC ACAAAGGCC ACGTACTATT ATCGATGCAT CCAATGATTT GAAAAGGAAA 360  
 AATCAAACCA TTAAGCGTGC CAAGCGACGA TATnGnCTA 400

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4149:

10 CAGCTATTGA TATCGATTAC CATACTGCTG TGGATAGCGA CAGGTTACAG TTGGAGGATA 60  
 CACTGAGTCC TCTGAGGAAT CAAATCCAAT TGACTTTGAA GAATCTACAC ATGAAAAATTC 120  
 15 AAAACATCAC GCTGATGTTG TTGAATATGA AGAAGATACA AACCCAGGTG GTGGTCAGGT 180  
 TACTACTGAG TCTAACITAG TTGAATTTGA CGAAGAGTCT ACAAAGGTA TTGTAACCTGG 240  
 CGCnTGAGCG ATCATACAAC AGTTGAAGAT ACGAAGAATA TACACTGAAG TAATCTGATT 300  
 20 GAATAGTGGA TGAATACCTG AAGAGCATGn TCAGCACAAG ACCAGTCGAG GAATnACTAA 360  
 AACCATCATC ATATTnCAT CTGGTTAGGA CTGAAATGGC 400

(2) INFORMATION FOR SEQ ID NO: 4150:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 371 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4150:

35 AAGGACGACA TTAGACGAAT CATCTGGAAA GATAATCAAA GAAGGTAATA ATCCTGTAGT 60  
 CGAAAATGTT GTCTCTCTTG AGTGGATCCT GAGTACGACG GAGCAGTGA AATTCGTCG 120  
 GAATCTGGGA GGACCATCTC CTAAGGCTAA ATACTCTCTA GTGACCGATA GTGAACCACT 180  
 40 ACCGTGCAGG AGAAGGTGAA AAGCACCCCG GAAGGAGTTG AAATAGAACC TGAACCCGTG 240  
 TGCTTACAAG TAGTCAGAGC CCGTTAATGG GTGATGGCGT GCCTTTTGTA GAATGAACCG 300  
 GOGAGTTACG ATTTGATGCA AGTTAAGCAT AAATGTGGAG CCGTAGCAGA ACnGTTnTG 360  
 45 AATAGGCGTT A 371

(2) INFORMATION FOR SEQ ID NO: 4151:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 366 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4151:

TCAGCTTTTT TGATATGTAT TTTATAATGT ACAGCTCGTT GACnnTAATT TTCCTTATAT 60  
 5 TAAGTGCCAT CAATACAAAA CCTAGCTCTC GTTTAACTTT ATTTATTCCT CGAACTGACA 120  
 TTCGAGTGAA CCCAAAATAG CCTTCATAAA TCCAAAAGCA GGCTCTACAT CAATTTTTCT 180  
 10 TTGACTATAG ATGTTTTTCG TTTCTGGTTC AGAAAGCTTT TGATTAATTT GGACTTTAAA 240  
 GTATCCCAA TTATAATTCT TCATGGATTT TCTTATTGGG ATTTGGAATT TGGTTTCATG 300  
 CATTGATGTC TCAAAGAACA TGATGGAACA GTCCnCACa TTCCAGATAG TTTGGAAGTC 360  
 15 TCGTTT 366

## (2) INFORMATION FOR SEQ ID NO: 4152:

## (i) SEQUENCE CHARACTERISTICS:

20 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4152:

TTTGCTGGC AACGTTCTAC TCTAGCGGAA CGTAAGITGG CTACCATCGT CGCTAAAGAC 60  
 25 CTTTCTTGAC TTGTGACAAT CGCTTGCTTC TTTCCCTCTCC TTCGGCTCTC GCTTACTCAT 120  
 30 TTAGCTCTAC TAAACTCGTT GCGCTCTTTT CTGTTTCGT CAGATTCAAA CGTTTTCACT 180  
 TCGCCAAGCC ATTTTTCITT GTGTTTACTT TTTATTITGA CGTTTITAGC ATAAAAAAA 240  
 35 GAGACCTTGC GGTCTCAATG CGGCTCATCG CATCCATTTT TTGCCTGGCA ACGTTCTACT 300  
 CTAGCGGGAC GTAAGTGGCT ACCATCGACG CTAAGAACCT TTCTGGACT TGGTGGACAA 360  
 TCGCTGCGCT CCTTCTCTCT CCTCGGGCTC TCGGCTTAGC 400

## (2) INFORMATION FOR SEQ ID NO: 4153:

## (i) SEQUENCE CHARACTERISTICS:

45 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4153:

50 TGATATTCCT GTACCACCTA TAATCGTTTT AATCGATGGG GGGACGCATA GGrATAGGCG 60  
 ACGTGCATT GGATTGCACG TCTAAGCAGT AAGGCTGAGT ATTAGGCAA TCCGGTACTC 120

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CGAGAAAAG CCTCTAGATA GAAAATAGGT GCCCGTACCG CAAACCGACA CAGGTAGTTC 240  
 AAGATGAGAT TCTAAGGTGG AGCGAGCGAA CTCTCGTTTA AGGACTCGGG CAAATGSGACC 300  
 5 CCGTTACTTC GGGGAGANGG GTGCTCTTTA nGGGTTTACG CCCAGAAGAG CGGCATTGAA 360  
 TAAGGCCCAA GCGnTGTTTT ATCCAAAACA CGGTCTCTGC 400

## (2) INFORMATION FOR SEQ ID NO: 4154:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4154:

20 TTTTAGCAAT CATTTAACA GTCAGTCATA TTAAGGCTG GCTAACGATT GTTATCTnGT 60  
 nCAGATTGTG AAGTTAAGAT TTCTTGTAAT GTGTATGCAG CACCATATGC TTCAAGTGCC 120  
 CATACCTCCA TCTCACCAA ACGTTGTCCA CGGAATTGCG CTTTACCGCC AAGTGGTTGT 180  
 25 TGTGTAAACA GTGAATATGG TCCTGTTGAA CGCGCATGTA ATTTATCATC AACCATGTGC 240  
 GCAAGTTTCA ACATGTACAT TACACCTACT GAAATACGGT TATCGAATGG TTCACCTGTA 300  
 CGTCCATCAT AAAGTACAGT TTTACCATCA CGAGCCATAC CAGCTTCTTC AATTGTTGGA 360  
 30 CCATACATCG TCATCGTTTG CACCGTCAA TACTGTGGA 400

## (2) INFORMATION FOR SEQ ID NO: 4155:

35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 361 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4155:

GATCCGAAAGT TACCAACAGG AGAGAAAGAG GAAGTTCCAG GTAAACCAGG AATTAAAGAT 60  
 45 CCAGAAACAG GAGATGTAGT TAGACCACCG GTCGATAGCG TAACAAAATA TGGACCTGTA 120  
 AAAGGAGACT CGATTGTAGA AAAAGAAGAA ATTCCATTG AGAAAGAACG TAAATTTAAT 180  
 50 CCTGATTAG CACCAAGGAC AGAAAAAGTA ACAAGAGAAG GACAAAAAGG TGAGAAGACA 240  
 ATAACGACGC CAACACTAAA AAATCCATTA ACTGGAGAAA TTATTAGTAA AGGTGAATCG 300  
 AAAGAAGAAA TCACAnAAGT CCAGTTAATG AATTAAACA TTGCGTGGCG AGAAATACCG 360

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## (2) INFORMATION FOR SEQ ID NO: 4156:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 380 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4156:

CAAAGTGACA GGTGGTGCAT GGTGTCGTC AGTCGTGTC GTGAGATGTT GGGTTAAGTC 60  
 CCGCAACGAG CGCAACCTTT AAGCTTAGTT GCCATCATTA AGTTGGGCAC TCTAAGTTGA 120  
 CTGCGGTGA CAAACCGGG GnaAGGTGGG GATGACGTCA AATCATCATG CCCCTTATGA 180  
 TTTGGGTAC ACACGTGCTA CAATGGACAA TACAAAGGSC AGCGAAACCG CGAGTGCAG 240  
 CAAATCCCAT AAAGTTGTTT TCAGTTCGGA TTGTAGTCTG CAACTCGACT ACATGAAGCT 300  
 GGGAAATCGCT AGTAATCGTT AGATCCAGCA TGGCTAACGG TGGATACGT TTCCCCGGGT 360  
 CCTTGTTACA CACCGCCCGT 380

## (2) INFORMATION FOR SEQ ID NO: 4157:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4157:

TGGAGAAGGA CCCAAAAATG TTGCCGTTT AAGGTTATGT TTTACAACAT TTCGAACTTA 60  
 TGGATGATGG ATTCTGCCAA GTTAAAAATA CTGAAGATGT ATTGGAGCAA TTCGGTATTC 120  
 AGCCAAATGA AGCATCTCAG TTTGTTAATA CAATTGCTGA CATCAAAGGC TTGAAAATAT 180  
 GGGTATTGTC AGTCGATGGA AGGTAATGAA ATCAGATGTC GATTACGTTT TAAAGGGCAA 240  
 TTGGATTATT AATGATATTG CGCAGATTTT GGTGGCGGTG GTCATCCGAA TCGCTCAGGA 300  
 GTTTCAGTGG ACCAGCTGGG GTGGATTTGA GCCACTTGCT ACCAGCTTTA CGGCACCAAA 360  
 ACTTnACTTA TAGGAAGGGG CCCATTCCAT CCAGGTGGGG 400

## (2) INFORMATION FOR SEQ ID NO: 4158:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 351 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4158:

5 AAATCTCTGG GATCAAATCT TACTTACAGC TCCCAAAGn CATATCGTCG TTAGTAACGT 60  
 CCTTCATCGG CTTCTAGTGC CAAGGCATCC ACCGTGCGCC CTTAATAACT TAATCTATGT 120  
 TTCCACCATT TTTATAAGTC AAACGTTAAC ATGAAGTTAC GTTCTTTTAT AAAAGAGATT 180  
 10 AAACGCGTTA TTAATCTTGT GAGTGTCTTT TCGAACACTA GCGATTATTT CTTATGAATT 240  
 CAAGCTTATT TAAAACTCTT TATCACTCG GTTTTGCTTG GTAAAACTA TATTTTACTT 300  
 ACTTATCTAG TTTTCAATGT ACAAATAATG GTGGAGACTA GCGGGATCGn n 351  
 15 (2) INFORMATION FOR SEQ ID NO: 4159:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 420 base pairs  
 (B) TYPE: nucleic acid  
 20 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4159:

25 AGTTAAAGGA ACITTTAAAG TGGTTGGCCG CCGTnATTGC CTTCTnACC TTTTGTCTCT 60  
 TCTCTTGT TA CTTTCTGT CCGTGGTCT AAATnGGAT TAAATTACG TCTTTCTTG 120  
 30 AATGGAATyT CTTCTTTTC TACAATCGAG TCTCCTTTA CAGTCCATA TTTTGTACG 180  
 CTATCGACCG GTGGTCTAAC TACGTCTCCT GTTTCGGAT TCTTAATTCC TGGTTTACCT 240  
 GGAACCTCyT CTTTCTCTCC TGTTGGTAAC TTCGGATCAA ATTGCTCTCG ATGACCTGGT 300  
 35 GTTATOGITT CTGGTCCGTA TTCTGTAAAT TCAITTAATCG GATCTTTTGT GATTTCCTCT 360  
 TTTGGTTCAC CnTnACGAA TAATnACTCC AGTAAAGGAT TTTTAAAGT TTGGTGTCTG 420  
 (2) INFORMATION FOR SEQ ID NO: 4160:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 359 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 45 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4160:

50 ACGATAATGG TGACGGGTTA CAAAGCCAAC ACAGCTAGGG TAGTATCCCA CCAGCGTCTCT 60  
 CCAAGTAATC TAGCGCTCAC GTTTCAAAGG CTCTACCTA TCCTGTACAA GCTGTGCCGA 120

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TGCATCTTCA CAGGTACTAT GATTTCACCG AGTCTCTCGT TGAGACAGTG CCCAanTCGT 240  
 TACGCCTTTC GTGCGGGTCG GAACTTACCC GACAAGGAnT TTCGCTACCT TAGGACCGTT 300  
 5 ATAGTTACGG CCGCCGTTA CTGGGGCTTC GATTCTAGC TTCGAGAAan TAACCACTC 359

(2) INFORMATION FOR SEQ ID NO: 4161:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 351 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4161:

ATTGACTAAG GTTCCAGAG GAAGGCTCGT CCGCTCTGGG TTAGTCGGGT CCTAAGCTGA 60  
 20 GGCCGnAAC GGTAGGGCGA TGGATAACAG GTTGATATTC CTGTACCACC TATAATCGTT 120  
 TTAATCGATG GGGGACGCA TAGGGATAGG CGAACGTGTC GATTGGATTG CACGCTAAG 180  
 CAGTAAGGCT GAGTATTAGG CAAATCCGGT ACTCGTTAAG GCTGGAGCTG TGATGGGGAG 240  
 25 AAGACATTGT GTCTTCGAGT CGTTGATTTC ACATGCCGA GAAAAGCCTC TAGATAGAAA 300  
 ATAGAGTGCCC GTGACCGCAA ACCGACACAG GTAGTnCAAG ATGAGAAanTC T 351

(2) INFORMATION FOR SEQ ID NO: 4162:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4162:

AnCGTCCTGC TTTGCACGCC AGAGGTCAGC GGTCGATCC CGCTAGTCTC CACCATTAT 60  
 TTTTACACG ATGAACATTG AAAACTGAAT GACAATATGT CAACGTTAAT TCCAAAAAAC 120  
 45 GTAACATATA GTTACAAACA TTATTAGTA TTTATGAGCT AATCAACAT CATAATTTTT 180  
 ATGGAGAGTT TGATCCTGGC TCAGGATGAA CGCTGGCGGC GTGCCTAATA CATGCAAGTC 240  
 GAGCGAACGG ACGAGAAGCT TGCTTCTCTG ATGTTAGCGG CGGACGGSTG AGTAACACGT 300  
 GGATAACCTA CCTATAAGAC TGGGGATAAC TTCGGGGAAC CGGAGCCAAT ACCGGATAAT 360  
 50 AnTTTGAACC GCATnGGTCC AnAAGTGAAA GACCGCTTG 400

(2) INFORMATION FOR SEQ ID NO: 4163:

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(A) LENGTH: 342 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4163:

10 ATTTTATATA TGAATAATC TGGGACAACA TTCATAAATC TTATTGTCGT CCATTTTTTT 60  
 AAAATAATAC CAATCTCATT TTAAATTCT AAACCTGGTT TCGTATAATA CGCTCTTAAA 120  
 TCTTTAAATT TAGGATTAT TTCTGTTGGT ACTGTTTTG TGGTTGGCGA TTGTGGTGTG 180  
 15 TCTGATTAG TAGATTGCAT TGGTTGTGGC GTGTTGTTG ATGGAGGTGT TGTCACTTTA 240  
 GTTGTAAAGGC GGTGTTGTG CATTTGCTGT TTGTTGCGGT GCTTCTACTT TnATTGCAGG 300  
 CGGTGTTGTC GCGTTTGGTT TTGnATGCGG TGCCTTCTATT TT 342

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(2) INFORMATION FOR SEQ ID NO: 4164:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4164:

TCACGACAG AGCTGACGAC AACCATGCAC CACCTGTCAC TTTGTCCCC GAGGAAGGGC 60  
 TCTATCTCTA GAGTTGTCAA AGGATGTCAA GATTTGTTAA GGTCTCTCGC GTTGCTTCGA 120  
 35 ATTAAACCAC ATGCTCCACC GCTTGTGCGG TTCCCGTCA ATTCTTTGA GTTTCACCT 180  
 TGCGGTGCTA CTCCCCAGGC GGAGTGCTTA ATGCGTTAAT GCCAGCACTA AAGGGGCGGA 240  
 AACCCCTAA ACACTTAGCA CTCCATCGTT TACGGCGTGG AACTACCAGG GTATCTAATC 300  
 40 CTGTTTGATC CCCACGTTT CGCACATCAG GTCATTAACA GACCAGAAAT CGCTTGGCCA 360  
 nGGGGGTnCC nCCAAAACCT TGGGGATTTA ACGGTAAAAA 400

45

(2) INFORMATION FOR SEQ ID NO: 4165:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4165:

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GCATTAATTT CATGTGTACC TTCGTACGTG TAAATCGCTT CTGCATCAGA GAAGAAACGT 120  
 5 GCAATATCAT AATCGTCAGC TAGTATGCCA TTACCACCTG TAATACCGCG GCCCATAGCT 180  
 ACTGTCTCAC GCAAACGTAA GGCATTATC ATCTTCGCG TTGAAGTTGC AACCTCGTCA 240  
 TATTACCAT GTGCTTGCAT ATTAGCTAAT TGAGCACATG TTGCCATTGC TTGAGCTAAA 300  
 10 TTA<sup>n</sup>CTTGCA TCATTGCTAG CTTTCTGTG TTAACGGATA TTACTAA<sup>n</sup>G GTTGCCGAAT 360  
 GCTTACGCTC AGGGA<sup>n</sup>TAA C<sup>n</sup>AAGTGGCA CGTAAGCGGC 400

(2) INFORMATION FOR SEQ ID NO: 4166:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4166:

AAAGTTC<sup>n</sup>TTT GGAAATAGTA ACGTTGAAGT TGTACTCACT GGTGATACAT TTGATCACTG 60  
 25 TTTAGCTGAA GCTTTAACTT ATACAAGTGA ACATCAAATG AACTTTATAG ATCCATTCAA 120  
 TAATGTTTCA ACAATTTCTG GACAAGGTAC GCTTGCTAAA GAAATGCTAG AACAAACAAA 180  
 30 GTCTGACAAAT GTTAACTTGG ATTATCTATT TGCCGCAATT GGTGGTGGCG GTTTAATTTT 240  
 AGGTATTAGT ACTTACTTTA AAACCTATTC ACCTACCACG GAAAATTATA GGTGTTGGAA 300  
 CCTTCAGGTG GCAAGTAGTA TGGTATGGAA T<sup>n</sup>GGTGGTG GGTAAATAAT C<sup>n</sup>GGT<sup>n</sup>GTC 360  
 35 CACATTGGCC CTAATAACCG ATAAAAATTTG GGGGGCCGGG 400

(2) INFORMATION FOR SEQ ID NO: 4167:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 358 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4167:

CTTATAATCC ACACCCTGAG CAAACGCT<sup>n</sup>C TTATGACAGA GTATTA<sup>n</sup>AAAT AAGCCGATAA 60  
 50 AGATACACAC CTTTACCACG TATTTAA<sup>n</sup>AT ACATTCACCC AATTCATTTT AATTTAATGG 120  
 ATTGAAGTAA CTAATTAAT ATTATGTTGT TCAATTA<sup>n</sup>AAA GCTTCATACA AACCTAATCT 180  
 ATTTGCATC CACCGGTAA CCGAACACT TGTCCGGTTG TATACTTGA TTCTTCTGGA 240

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GTTCCTTTGTA CCAAATGnTT GGGGATTTTA CTnTGCGGT TGTCCACCAG AAATTTGT 358

(2) INFORMATION FOR SEQ ID NO: 4168:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4168:

TTTCTTGACC ATATGGACGT AAAGAGATGT TAGCATCACA ACGTAAAGAT CCTCTTCCCA 60  
 TCTTAAGCTC TGATACACCA GTGTATTGAA TAATTGAACG CAATTTTCTT AAATATGCAT 120  
 ATGCTCTTTT AGGTGAACGA ATATCTGGTT CAGATACGAT TTCAATTAGC GGTGTACCTT 180  
 GACGGTTCAA GTCAACTAAT GAATACTCAC CTTTATGTGT TGACTTACCA GCATCTTCTT 240  
 CCATGGGAA GACGAGTAAT ACCGATTCGT TTTGTTTCAC CGTCGACTTC GATATCGATA 300  
 TATCCATTTT CACCAATTGG TTGATCAAAAT TGAGAAhTTG AGAGCTTnTG GnTTAGCTGG 360  
 ATAGAAATAG TTCTTACGOT CAACTTAGAT CGTTGCGAT 400

(2) INFORMATION FOR SEQ ID NO: 4169:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4169:

ACCATGTTTG AATGAATCCA TTGGAATCAT TATTGAAGTA AATTAAGGAA TCTATAATGT 60  
 TCGTTAAATA AAACGATGCC CGTTGTGCTT CACACCCGAT AGATAGGGAT TTACAGATAA 120  
 ATTCAGGTCT CTTCACGTC ATATTGGAC CCATCGAAAA TTCGGGTTCT CAAATCATCG 180  
 AACATAACAA AAGAAGCTAA GCAACATGTA GCGCGTTGTC ACTTAACCTC TTGTTTTTCC 240  
 GATGACAGCT TCTATTAGA GAATGTCATG ATTATTTTAT ATTCACCTCA ATGTTATCAA 300  
 TATTAGTGCC ATCTATGACA TCTGCCATGC GATTTCTTG TAATTTTTTG TGCAATCAAC 360  
 GTGTACnTCC ACGGTTTCA TTTAAhACA ATTTACCGGA 400

(2) INFORMATION FOR SEQ ID NO: 4170:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 395 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4170:

TACCGAATCG AAGCCCCAGT AAACGGCGGC CGTAACTATA ACGTCCTAA GGTAGCGAAA 60  
TTCCTTGTCG GGTAAAGTTCC GACCCGCACG AAAGGCGTAA CGATTGGGC ACTGTCTCAA 120  
CGAGAGACTC GGTGAAATCA TAGTACCTGT GAAGATGCAG GTTACCCGCG ACAGACGGA 180  
AAGACCCCGT GGAGCTTTAC TGAGCTGA TATTGAAATT CGGCACAGCT TGTACAGGA 240  
TAGGTAAGGA GCCTTTGAA ACGTGAGCGC TAnTTTACGT GGrAGGCGCT GGGTGGGGAT 300  
ACTTACCCTA AGCTGTGTTG GCTTTCTAAC CCGACCAAnT TATCGTGGTG GGGAGACCAT 360  
GGTCAAGCGG GGCATTTTGA ATGGGGGGCG GTTCG 395

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(2) INFORMATION FOR SEQ ID NO: 4171:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 371 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4171:

TACATTATAG CTTTAATCGT TTGAAGTATA GTTGAAACC AGTAGTCACA GCTGTTCAAG 60  
GTGCGTCCTT AGGCGGTGGC TGTGAGCTTG TACTTTACTC ACCTATTGTT GTCGTGCAA 120  
GTGAAACATA TATCGGTCTT GTTGAAGCAG GTGTTGGCTT ATTACCGAGT GGGGTGGCC 180  
TTGCAGAAAT GGCTGATGCG ATATTACGCA CATCGCATAA GTTTGATGAC AAACAAGCTT 240  
CCATGACAAA AGTACTGACG AATATCGCAT TCGGAAnGCT CTACAAATGC CTTTGAGGCA 300  
CGTCGTATGG GTATTTACCG TGGATACAGA TACGATnATT TCCAATACAG CACAACGnGT 360  
CGAAGTGGCG C 371

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(2) INFORMATION FOR SEQ ID NO: 4172:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 361 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4172:

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GCTGAGCTAA GCGCCCAATAA TAATTACAGT ATATCGGGAA GACAGGATTC GAACCTGCGA 120  
 CCCCTTGGTC CCAAACCAAG TGCTCTACCA AGCTGAGCTA CTCCCGTAT AATTAACGCG 180  
 5 CCCGATAGGA GTCGAACCA TAACCTCTTG ATCCGTAGTC AAACGCTCTA TCCAATTGAG 240  
 CTACGGGCGC ATATGTTTTT ATTGAAAATn GTGCCGAGGA CcHGAATGAA CCGGTACGTG 300  
 10 ATCATTACCG CAGATTTTAA GTCTGTGCG TCTGCCAGTT CCGCAnCCCG GACTATAAAA 360  
 T 361

(2) INFORMATION FOR SEQ ID NO: 4173:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 380 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4173:

GTACAGATGC ATTGTTAAAC AATCAGTTGC AACAGCTGTT GAAACTGGTA GAGTATCTAA 60  
 25 TGGTGATTTA ATCATTATTA CTGCTGGTGT ACCAACTGGT GAAACTGGAA CTACTAATAT 120  
 GATGAAAATC CACCTAGTTG GTGACGAAAT TGCTAATGGT CAAGGTATTG GACGTGGATC 180  
 AGTTGTTGGT ACTACGTTAG TTGCTGAAAC TGTTAAAGAT TTAGAAGGTA AAGATTTATC 240  
 30 TGACAAAGTT ATCGTTACTA ACTCCATCGA TGAACCGTTT GTACCTTATG TAGAAAAAGC 300  
 TTTAGGCTTA ATTACAGAAG AAATGGTATT nCACACCCAG TGCCATGGTT GGTTAGGAAA 360  
 35 AGnAATCCCA CCGTTGTAnG 380

(2) INFORMATION FOR SEQ ID NO: 4174:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4174:

CGATTGGATT GCACGTCTAA GCAGTAAGGC TGAGTATTAG GCAAATCCGG TACTCGTTAG 60  
 CTGAGCTGTG ATGGGGAGAA GACATTGAGT CTTCGAAGTC GTTGATTTC AACTGCCGAG 120  
 50 AAAAGCCTCT AGATAGAAAA TAGGTGCCCG TACCGCAAC CGACACAGGT AGTCAAGATG 180  
 AGAATTCTAA GGTGGAGCGA GCGAACTCTC GTTTAAGGAA CTCGGGCAAA ATGGACCCCG 240

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GCCCCAAGCGC TGTITATCCA AAACACAGTC TCTGCThAAC CGTAGGGGAT TGTATAGGGG 360  
 CTTACGCCTG CCOGTCGCTT GGAAGGTTTA AAAGGGTGCT 400

(2) INFORMATION FOR SEQ ID NO: 4175:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 348 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4175:

AGCCATGGCT CAGCGAGGTA GGACTCGAAC CTACGACCGA TCGGTTAACA GCGATAGCT 60  
 CTACCACTGA GCTACTGTGG ATTAATATTA TGCCTGGCAA CGTTCTACTC TAGCGGAACG 120  
 TAATTCGhAC TACCATCGAC GCTAAGGAGC TTAACCTCTG TGTTCGGCAT GGGAACAGGT 180  
 GTGACCTCCT TGCTATAGTC ACCAGACATA TGAhTGTAA TTTACATTC AAAACTAGAT 240  
 AGTAAGTAAA AGTGATTTTG CTTCGCAAAA CATTIATTTT GGATTAAGTC TTCGATCGAT 300  
 TAGTATTCTG CAGCTCCACA TGTGCACCAT GCTThCCACC TCGAACCT 348

(2) INFORMATION FOR SEQ ID NO: 4176:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 344 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4176:

CATTTTTTTA AAATAATACC AATCTCATT TTAATTTCTA AACTGGGITT CGTATAATAC 60  
 GCTCTTAAAT CTTTAAATTT AGGATTIATT TCTGTGTGTA CTGTGTTTGT GGTGGCGAT 120  
 TGTGGTGTGT CTGATTIAGT AGATTGCATT GGTGTGCGG TGTGTTGTGA TGGAGGTGTT 180  
 GTCACCTTAG TTGAAGGCGG TGTGTGCGCA TTTGCTGTTT GTTGCAGTGC TTCTACTTTA 240  
 GTTGAGGCGG GTGTGTGTCG GTTTGGTTTT GATTGCGGTG CTTCATTTTT AGTTGAGGGC 300  
 GGTGTTGANT GTGGTGCTTC CACTTTAGGG hAAGAThAGT GGTG 344

(2) INFORMATION FOR SEQ ID NO: 4177:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 362 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4177:

5 CAGAACCTTG EAATGAATCG CGATGGAATA TCTCTATCTG nAAACAGATT TCTTTTGTG 60  
 CGCCAATGGC CTTGGAATTG TTTAAATAAA TCTATTGGG CTCTTTATC AATGTCATAA 120  
 CCTAATGCTT TTAACCTCTC TGAGAAGCGT GTTTACCAGA TAATTTTCCT AATGGAAGTT 180  
 10 CAGTCGTGCT TACACCAACA AGTTGAGGTG TCATAATTTC ATATGTTTCA CGATGTTTIA 240  
 ATACGCCATC TTGGTGAATA CCTGATTGAT GACTAAATGC ATTGGCCAA CAATTGCTTT 300  
 ATTTCTAGGC ACTGAATAC CTGCATATCT TGAATATAA TCCGAGGTTT TAGTTCCTCG 360  
 15 AG 362

## (2) INFORMATION FOR SEQ ID NO: 4178:

- (1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4178:

GGAGCTAATA CCGGATAATA TTTGAACCG CATGGTAAAG nTGGAAAGAC GGTCTTGCTG 60  
 30 TCACCTATAG ATGGATCCGC GCTGCATTAG CTAGTTGGTA AGGTAACGGC TTACCAAGGC 120  
 AACGATGCAT AGCCGACCTG AGAGGGTGAT CGGCCACACT GGAAGTGAAGA CACGGTCCAG 180  
 ACTCCTACGG GAGGCAGCAG TAGGGAATCT TCCGCAATGG GCGAAACTTn ACGGAGCAAC 240  
 35 GCCGCGTGAG TGATGAAGGT CTTCGGATCG TAAAACTCTG TTATTAGGGG AGGACATATG 300  
 TGTAAGTAAC TGTGCACATT TTGACGGTA CCTnATCAGG AAGCCACGGT TTAATAGGGG 360  
 CCCAGAAGCC CCGTTAATA CGTGGGTGGG nAAGGGTTTT 400

## (2) INFORMATION FOR SEQ ID NO: 4179:

- (1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 371 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4179:

50 GTTGTTCAG CAGCGACACA GTGATTCCA TTCTAGAAA ATGATGACTC AAACCGTGCA 60

GTTGGTACAG GTATGGAACA CGTTGCAGCA CGTGATTCTG GTGCGGCTAT TACAGCTAAG 180  
 CACAGAGGTC GTGTGGAACA TGTGTAATCT AATGAAATTC TTGTTCTGTCG TCTAGTTGGA 240  
 5 AGAGAACGGC GTTTGAACAT GAAAGGTGGA TTAAGATCGC TATCCATTAG CTAAATTTAA 300  
 ACGTTCAAAC TCAGGTACAT GTTACAACCA ACGTCCAATC GTTGCCAGTT GGGAGATGTT 360  
 GTTGGnnnTA C 371

(2) INFORMATION FOR SEQ ID NO: 4180:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 344 base pairs  
 15 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4180:

AAAGGGAATC GAATTTTCTT TCTCTTCTC CGGGTACTAA GATGTTTCAG TTCTCCGGGT 60  
 GTGCTTCTG ATATGCTATG TATTACATA TCGATAACAT GACATAACTC ATGCTGGGT 120  
 25 TCCCATTCG GAAATCTCTG GATCAAAGCT TACTTACAAC TCCCAAAGC ATATCGTCGT 180  
 TAGTAACGTC CTTTCATCGC TTCTAATGCC AANGCATCCA CCGTGCGCC TTAATAACTT 240  
 30 AATCTATGTT TCCACCATTT TTATAAGTCA AACGCTCACA TACGGCTTCG TTTTCATTAT 300  
 nTnAAATGCT CATTACATA AGTAACTCT GCTTTAAAT AATT 344

(2) INFORMATION FOR SEQ ID NO: 4181:

35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 343 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4181:

45 CCGTGATCGG AAGGTGCGGC TGGATCACCT CCTTTCTAAG GATATATTCTG GAACATCTTC 60  
 TTCAGAAGAT CGGGAATAAC GTGACATATT GTATTTCAGTT TTGAATGTTT GTTCATTCAA 120  
 ATTAATGGGC CTATAGCTCA GCTGGTTAGA GCGCACGCCT GATAAGCGTG AGGTCGGTGG 180  
 50 TTCGAGTCCA CTTAGGCCCA CCATTAATTT AATACCTATT TGGGGGCTTA GCTCAGCnGG 240  
 GAGAGCGCCT GCTTTGCACG CnGAGGTCAG CGGTTGCATC CCGCTAGTCT CCACCATTAT 300  
 TGTGACATTG AAAACTAGAT AAGTGAnGTA AAAATATAGA TTT 343

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4182:

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10 CAGAGCCAAC TCGTATGTGA TTGICTGCG CCAATGTATG CATCATCAAA AGTTCITGGAC      60
    TACTACACGC AAACGCTGGT ACATTATGAT GTTCGGTAAA CCAAATTCGC TTAAAGCCAA      120
15 GTCGATCTGC TAAATTTGCA AGTGTCACGT AATCTTGCAA TGCCTTTTGT GCATCCTTAC      180
    CTTTCATCTAT TAAGGCATAG TCTAATACGC TTAATTTAAC CAATCCGTCA TCTCCAAACT      240
    TATCCTGTCA TGTCAAACGC ACATAACATT TTAGCGTCTT AATACCATTC CCTCTTCATA      300
20 TACCCAGGTA TATGATAACG TTTTCAATAA CTTTATATCT TTGCGCTTAT TThCTTTTCA      360
    TATCATATTT CAGACTACAA ATGCATCATA GTTAATTAAA      400
  
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(2) INFORMATION FOR SEQ ID NO: 4183:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4183:

```

35 AAAGTATGAA AGATGGTAGT GACGCGGTG GTGATTGGGC TGTATTGAAT GCACCTCATT      60
    ACACAGCTGC AGGTGGTTCA TGGATTTTCA TCCATCACGG TGGCGGTGTT GGCATGGGAT      120
    ATTCACTTCA TCGCGGTATG GTTGTGTTAG CAGATGGATC AGAGCGTGCT GAAGGAAGAT      180
40 TGGACAGTGT ATTGACGACT GACCCAGGTA TGGTGTGGCC CGACATGTTG nATGCTGGCT      240
    ATGACATCGC TATTCAAACA GCTAAAGAAA AAGGTATTCA nATTCCAATG ATTGGTGAAA      300
45 GCAGGTGATA AGTAATGAAT GATTTAATAT TAATCAATA GCAGAnTATT TTTACCGGGT      360
    CCAACAGATA AACCTTTGAA GGGTTAGGTA TTAGATGCAT      400
  
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(2) INFORMATION FOR SEQ ID NO: 4184:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 342 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4184:

TTCCTGTGTC ATCGGCATCA CTATTATTAG CATGACTCAA TTATTGGCAT CACAATATGT 60  
 5 CATTGCAGTT ATCATTGGTT TCGTCATATG TCGCATAGGT AATGGTTTAG TCGCAACACC 120  
 TGGACTTACG ATTGCAATTT TCAGTATGCC TAATGAAAAA GTTGGTTTAG CTACAGGATT 180  
 10 ATATAAAATG AGTGGTACAT TAGGTGGCTC CTTTGGTATA GCACTAAGTA CTACAGTTTT 240  
 CAGTATGTTA CAACTAAACT ATGCACCAAG TGTAGCTGCA ACCGTAACAT TTATAGTCAG 300  
 CATTGTATTG ATGTCCTTG GGTnCATTGT CTGCATACAT GA 342

## (2) INFORMATION FOR SEQ ID NO: 4185:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 360 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 20 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4185:

AAGCATACTC TGAAGCGGTG AACAAAAATA GAACAGATCA CATTAGACAT TTACTTGAAT 60  
 TTAAGCATG TACACCGATT GACATCGACC AAGTTGAACC GGTAAGTGAC ATTGTCAAAC 120  
 30 GCTTTAATAC AGGGGCGATG AGTTATGGAT CGATTTCAGC GGAACACATG AAACGTTAGC 180  
 ACAAGCCATG AACCAATTAG GTGAAAAGAG TAATAGTGGT GAAGGTGGCG AATGCAAAA 240  
 CGTTATGAAG TACAAGTTGA TGAAGCAAC AAGTAAGTG CGATTnAACA AGTTGCTTCT 300  
 35 GGGCGTTTTG GTGTACTAGT GATTATTAC CACCTGCCAA GGAATTCCAA TTnACTTGC 360

## (2) INFORMATION FOR SEQ ID NO: 4186:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4186:

CCCAAGCGGA ATTCTAAAT GATCGTCGCT CCATTCTTCA TTTTAATAAA TCCAAACGCA 60  
 50 GAATCTTCAA CTGTAATTC ATCTGGATTG CATGAACCCC AAGCGTTTGC CGCATGATGC 120  
 TGTTTATTTA ATTTATGGAA TGTGAACCCC ATCACTGATT CTGGTTCATA ATTATCCATC 180  
 ATCCATAACG TTAATCTAA AGCGTGTGTA CCGATATCGA TTAATGGTCC TCCACCTTGG 240

nCTTTCGAA GTTAAATGTC TCCTAAGTCG CCACGTTGGC GCTGCCTGGA TGGAAAATTG 360  
 GACGATCTGC TCGGGAAACG AATTTGGATA AACnGATGGG 400

5 (2) INFORMATION FOR SEQ ID NO: 4187:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 349 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4187:

GAATCATCTG GCAACnCCC CCAAAGAAGG TAATAATCCT GTAGTCGAAA ATGTTGTCTC 60  
 TCTTGAGTGG ATCCTGAGTA CGACGGAGCA CGTGAATTC CGTCGGAATC TGGGAGGACC 120  
 20 ATCTCCTAAG GCTAAATACT CTCTAGTGAC CGATAGTGAA CCAGTACCGT GAGGGAAAAGG 180  
 TGAAAAGCAC CCCGGAAGGG ATGTGAAATA GAACCTGAAA CCGTGTGCTT ACAAGTAGTC 240  
 AGAGCCCGTT AATGGGTGAT GCGTGCCTT TTGTAGAATG AACCGGCGAG TTACGATTTC 300  
 25 ATGCAAnGTT AAGCAGTACA TGTGGAGCCG TAGCGAAAGC GAnGTCTGA 349

(2) INFORMATION FOR SEQ ID NO: 4188:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 336 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4188:

TGGATCCTGA GTACGACGGA GCACGTGAAA TTCCGTCGGA ATCTGGGAGG ACCATCTCCT 60  
 40 AAGGCTAAAT ACTCTCTAGT GACCGATAGT GAACCACTAC CGTAGGGGAA AGGTGAAAAG 120  
 CACCCCGGAA GGGGAGTGAn ATAGAACCTG AAACCGTGTG CTTACAAGTA GTCAGAGCCC 180  
 45 GTTAATGGGT GATGGCGTGC CTTTGTGAGA ATGAACCGGC GAGTTACGAT TTGATGCAAG 240  
 GTTAAGCAGT AAATGTGGAn CCGTAGCGAA ACGAGTCTGA ATAGGGCGTT TAGTATTTCG 300  
 TCGTAGACCC GAAACCAGGT GATCTACCCT ngGTCA 336

50 (2) INFORMATION FOR SEQ ID NO: 4189:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 358 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4189:

5 CAAGGATGCT TAAGAAATAC AATTTATTAC CCAGCATTTA ATAATGGTGC TATAGAAGGA 60  
 ATTAATAATA AGATAAAATT AATCAAGTGA ATTTCTTTTG GTTACAGAAA TTTCACAAC 120  
 TTTAAGCAC GTATAATGAT GATTTTCAGC TTGTACAAAG GAGAAAAAAA GAAGACAACC 180  
 10 AAGCCCAATA ATGGACTGGC CGCCTAATAA TAAAGCTCT AAAAGTTGTA TTTTAAAAAT 240  
 AGTTCTTTAA ATTATATACC CACCACATTT GGTGGAGGAC CTAACAAAAA GCACITCCCC 300  
 AAAAATGGGA AAGTGAAGT AGTGAGCChT AGGAGGGTTC GGACCTCTCh nCCCTCT 358

(2) INFORMATION FOR SEQ ID NO: 4190:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 362 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4190:

25 TCACCAAGTT GAGCAAGAA GATGTTCTGC GTACCTTGAA CTAAGTGCCC TTTGACTTCT 60  
 AAnGTACCAC CAAGTGCCGT CTGCCAAAAC GGTAAGTAAA AAATATGGTG TARACCGAGT 120  
 30 GGACCTAACA ATCTTAAGAT GAAGCCATAA ACAAAGTAC CGATGGCACC TGTTTTCGTT 180  
 ACAATCCAC CAACATGATA AATGCCGGCT TGTATGCTTG GCCAAATGAA AAACATCAAT 240  
 ACACCTAAAA AGATTGGGC AAATGCTGTG ACAATAGGGA CAnATGTAGA GCCACCAAG 300  
 35 AAACCTAAAT ACGTGGTAA TACCATTGTG GnTATTGTGT GTGAAGTATT GCGGTCATAA 360  
 TA 362

(2) INFORMATION FOR SEQ ID NO: 4191:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 362 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4191:

50 TGATACCCA TGTTCTGGAC TCCCAATTGA AATTGAATTG GGCATTGCGA GTTTGTCTGG 60  
 nATTGCGTAA CCGChGACAG GTCCCTCTGT GCCAACAGT GCTCTACCTC CAATAATCAT 120

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HAATTCCTCG CTAACCTCAG TTCATCCGCT CACTTTTCAA CGTAAGTCGG TTCGGTCTC  
 CATTCACTGT TACCTGAAC TCAACCTGAC CAAGGTAGAT CACCTGGTT CGGTCTACG  
 ACCAAATACT AAACGCCCTA TTCAGACTCG CTTTCGCTAA GGCTCCACAT TTACTGCTTA  
 AC

240 300 360 362

(2) INFORMATION FOR SEQ ID NO: 4192:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 400 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4192:

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CGTGIATTAT GCCTTCTACA TTGGCCATTA TGAAAACCTA TTATCAGGGT GCTGAACGTC  
 AGCGTGCCCTT AAGTTATTGG TCTATCGGTT CTGGGGTGG CAGTGTATC TGTTCACTCT  
 TCGGTGGTGC AGTTGCGACA ACTATGGGTT GGAGATGGAT TTTCATCTTC TCAATTATCG  
 TTGCGGTACT TTCAATGTTA CTCATCAAAG GGACGCCTGA AACGAAATCA GAAATTACCA  
 ATACACATAA ATTTGACGTT GCAGGGCTAA TTGTTCTAGT AGTATGTTGC TAAGTTAAAC  
 GTTGTCATTA CTAAGGTGC AGCACTTGGn TACACATCAT TATGGGTCTT GGGTTGAATG  
 CCAATCGGAA ATTGTAGCAT CnTTAATITC CTAAGAGTG

60 120 180 240 300 360 400

(2) INFORMATION FOR SEQ ID NO: 4193:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 373 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4193:

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AATCCCATGG ACCCTCAAT TCTTATCTA AATAGTACCC TAATGAAGTT TTTCTGTGCA  
 TGTGATTAA TTCATGTAA CCGATGACAC CAACTAGCGT TCCTTCATAC CAAATGCCAC  
 ACTGAAATCC ATTACCATCA GCAAATTGCA AAAGTCCTCT TTAATAAAAT GCACGCGTAT  
 CTGATGGTTG CTCAGTTGCA TCTACCCAAG GTAACCATTC CCTAAGTGAA TTTCTTGAAC  
 GATTGACTAA ATTGAAAGC GCTTCTGTGT CATGAGCTTC TAAATTTTAA ATGTTATTGT  
 TCAATCACTT TCATTCCAAA CATACnATCA CATCCTCATT CATnTCATA TAATCCGGnA

60 120 180 240 300 360

## (2) INFORMATION FOR SEQ ID NO: 4194:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 348 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4194:

```

ACAAAGGACG ACATTAGACG AATCATCTGG AAAGAGAATC AAAGGTAATA ATCCTGTAGT      60
CGAAAAATGT GTCTCGAGTG GATCCTGAGT ACGACGGAGC ACGTGAAATT CCGTCGGAAT      120
CTnGGAGGAC CATCTCCTAA GGCTAAATAC TCTCTAGTGA CCGATAGTGA ACCAGTACCG      180
TGAGGAAAGG TGAAAAGCAC CCCGGAAGGG AGGTGTAAAT AGAACCTGAA ACCGTGTGCT      240
TACAAGTAGT CAGAGCCCGT TAATGGGTGA TGGCGTGCCT TTTGTAGAAT GGAACCGCGG      300
AGTTtACGAT TTGgAttGCA AGGTTAAGCA GTAAATGTGG GAGCCGTA      348

```

## (2) INFORMATION FOR SEQ ID NO: 4195:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 340 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4195:

```

AAGGCAGATG CTCTCCAGC TGAGCTAATT CTCGGAITTA AAAGTGCCTG GCAACGTTCT      60
ACTCTAGCGG AAnTAAGTnG GACTACCATC GACGCTAAGG AGCTTAACCT CTGTGTGCGG      120
CATGGGAACA GGTGTGACCT CTTTGTCTATA GTCACCAGAC ATATGAATGT AATTTATACA      180
TTCAAAACTA GATAGTAAGT AAAAGTGATT TTGCTTCGCA AAACATTTAT TTTGATTAAG      240
TCTTCGATCG ATTAGTATTC GTCAGTCCA CATGTCACCA TGCTTCCACC TCGAACCTAT      300
TAACCTCATC ATCTTTGAGG GATCTTATAA nCGAGTTGGG      340

```

## (2) INFORMATION FOR SEQ ID NO: 4196:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 331 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

TTTGCAGGTG GCGGTGCGAC TGCAGAAGAC GTTAAATTAA TGAAAGATAC AGTAGGTGCT 60  
 GATGTAGAAG TAAAGCATC AGGTGGCGTA CGTAATTAG AAGATTTCAA TAAATGGTT 120  
 5 GAAGCAGGTG CGACACGTAT TGGTGGGAGC GcncGTGTTCA AATTATGCAA GGTTTAGAAG 180  
 CAGATTGAGA TTACTAATAT ATATnAATnT TGGGAGTGAT AGCTATGACA AGACCATTTA 240  
 10 ATCGTGTACA TTTAATCGTA ATGGATTGAG TAGGTATTGG TGAAGCGCCA GACGCGCTG 300  
 ATTTTAAAG ATGGAGGTTT ACATACTTTT A 331

(2) INFORMATION FOR SEQ ID NO: 4197:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 371 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4197:

GTAGACGTCC CGATAGCCGT TACGCATGGT TACGATGTGT ATTGGTGTGC GCATGGGTGC 60  
 25 AGCTGTCTATA TTTGAATAIG TCGTTAGAA TGGTTGATT TGGATGAAGC GGATTCGTTT 120  
 TGTATTGAA TGAAGTAGGC TGAAGTTGAA GCCAGTTGAA GTTGAAGCGG GTTGAAGCAA 180  
 30 TTTCGTTTGA TTGAATGAAG CTGTGTGAAA TATAGTGATT GAACAAAAAA AGTGGTTTAA 240  
 TGGGATGGTG GTTATTTCCG TTTTAGAATT TAACATTAC ACGTCTAATT TTAATCATT 300  
 GTTTTAAATT TTATGAATCG AAGCCCTTGG GATTTAATAT TATTGCTAAT GcncAGTAACT 360  
 35 nATCTGATTG T 371

(2) INFORMATION FOR SEQ ID NO: 4198:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4198:

GCGACCCCAA CCTTGGCAAG GTTGTnATTC TACCGCTGAA CTACTTCTGC ATATGCGGGT 60  
 50 GAAGGGAGTC GAACCCCCAC GCCGTAAGCT nAGnATCCCTA AGTCTAGTGC GTCTGCCAAT 120  
 TCGCCACAC CGCAAAATGG TGAGCCATAG AGGATTCGAA CCTCTGACCC TCTGATTAAA 180  
 55 AGTCAGATGC TCTACCAACT GAGCTAATGG CTCTTCCATG GTGCCGGCCA GAGGACTTGA 240

TAAGAATAAA TGGTGSAGAA TGACGGGTC GnACCGTGA CCCTGTGCTT GTTAAGGCAG 360  
 ATGGTTTCC CACTGGGTA AATTTTCGA TTTAAAAATG 400

(2) INFORMATION FOR SEQ ID NO: 4199:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4199:

ATCAGTTGCT GTTGC GCCTT GTGGAATGA ATTTACTAGT CGTACACCAA TAACCTCTGG 60  
 AATTGGGAAA TAAGAAGGTT GTCCAAGCAT TCCAGCTTCA GCTTCAATAC CACCAACACC 120  
 CCATCCTAGT ACGCCAATAC CATTATCAT TGTGTATGT GAATCAGTAC CAACTAATGT 180  
 ATCTGAAAT GCAGTTTTT CACCATCTAC ATCAGGAACA TGTAACAAC TGTCTAAATA 240  
 TTCTAAGTTA ACTTGGTGAA CTATTCCAGT TGCAGGAGGG AACTGCATTG TAATTATCAA 300  
 ATGCTTTCG TGGCCCAAT TTAATAAACT GGATAACGTT CATnGTTACG TTCCAATTCC 360  
 TAATTTCcna ATTACGGTTC CnAGAGCTTC TGGGATTTTG 400

(2) INFORMATION FOR SEQ ID NO: 4200:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 335 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4200:

CAACCTTTAT TGGTAAAAAC ACCCCAGCCA GGCACCTTAC GCCTACGCAT CGCTTGTA 60  
 CGTGCTACTA nAGGTTTACC AACCACACCT GATTCAATTG CTTTTTTAGC AGTAATTGCC 120  
 ACATCTGTGT GACGATAATG ATATCGGACA GTTAATAATT TGTGATTTT ATTAGCCGCT 180  
 TCAATCATGC GATCACACTC TTCCGTCGTC ATCGCCATTG GCTTTTCACA CAATACATGG 240  
 CACACCATGG TTCAATGcNT CTATAGAAAG ATCAGCAGGA ATTTATTAGG TGTACAAATG 300  
 ACCCATCAAC AAGTTTAAAC AGCTCGCTAG GTGnC 335

(2) INFORMATION FOR SEQ ID NO: 4201:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 370 base pairs



(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4201:

ATGATGTGGC GGTGGTGAAA TCAGACCGAT ACCTGGCGTT GACCTCTTG TCTTGC AAT	60
CCACGGATAT ACCTTAGTAC CAGTAATTG ACCACCTTCA CCAGGCTTTG CACCTTGGGC	120
AACTTTAATT TGAATTTCTT TGGCATGTTG TAAATAATCA CTAGTTACAC CAAAAGCCCC	180
AGAAGCAACT TGTTTAATCG CACTTACTTT GTTGCTTCCA TCAACTTGTA CTTCATAACG	240
TTTGTGCTCT TCGGCAACTT CACCACTATT ACTCTTCCA nCTAATTGGG TCATGGGCTG	300
TGCTAACGTT TCATGTGCTT CCGnTgnAAT CGATCCATAA CTCATCGGCC CCGTATTAAA	360
GCGGTGGAC	370

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(2) INFORMATION FOR SEQ ID NO: 4202:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 380 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4202:

CAGCTAGCGA CTTACCTTGA CGTTTGTnGT ATTCAATCCA GCTTTGTnGG AATGAGtCGG	60
gATATAAGCA TCTTTAGATA ATGCACCATC AACTAATGGA TATTATGTC CAGTTGGaGC	120
CAGAAATCAT AAACGTCTTC AGTGTAAGCA ACAGCATCTT CaTTTAATGC CAAAATGCTT	180
GGaTTAgTGC AATAACCATC GCAACTGnGC CAnACCTTGT GTTGGCTCGC GGCCTGAATT	240
CAATCCATAA CGTGCTGTAT CTGTAGCAAT AACTAATACT TTTTCATTcG GTCTAGTTGC	300
TAAATAATCT TTAGCTAATT GAATTGCTGG TGTTGCAGCA TAACAAGCTT CTTTCATTTC	360
AAAGCAGCGT GCAAAAGGTT	380

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(2) INFORMATION FOR SEQ ID NO: 4203:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4203:

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GACATGTCAC CAAGAGCATT AGAAGAAGTT ATTACTTTG CTCTTATGT TGTGTAGAT 120  
 CCAGGTCCAA CTGGTTTAGA AAAGAAAAC TATTATCTG AAGCTGAAT CAGAGATTAT 180  
 5 TATGATAAAT ACCCAGGTCA ATTCGTTGCA AAAATGGGTG CAGAAGGTAT TAAAGATTTA 240  
 CTTGGAAGAG ATTGATCITG ACGAGGAAC TAAATGTGA CGCGATGAGT TGGGAATCAG 300  
 10 CTACTGGGTC CAAAGACTTA CTCCTGGCA ATTAACGGT TAGAAGTTGT TnGAATCATC 360  
 CCGTAATCCA GGTACCACC CTCnnGGnT GGATTAGGA 400

(2) INFORMATION FOR SEQ ID NO: 4204:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 329 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4204:

AAATTCCTCC GCCCTGTAAT TCCTTAAACG CTCAACGGC ATCGTnAATn TCTTACATT 60  
 25 AGATAAAGAT GCATTGCAAG ATATCGTCAA CTTATTATTA GACGATGTAC AAGTTACATT 120  
 AGACAAAAA GGTATTACGA TGGACGTTTC TCAAGATGCG AAAGATTGGT TAATTGAnGA 180  
 30 AGGCTATGAT GAAGAATTAG GTGCACGTCC ATTAAGACGT ATTGTTGAAC AGCAAGTACG 240  
 TGACAAAATT ACAGATTACT ATTTAGATCA TACAGACGTT AAACATGTGG ATATAGATGT 300  
 TGAGGATAAC GAATTAGTCG TAAAGGTA 329

35 (2) INFORMATION FOR SEQ ID NO: 4205:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 357 base pairs  
 (B) TYPE: nucleic acid  
 40 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4205:

45 GGTAACAAA AAACCTCCCT TTGGAAGCGA ATTATGGAGC GGAAGATAGG ATTTACACCT 60  
 ATACCTCGTT CCGGGAAGG CTGTTTCTAA AAGTTGAAC ACTCCGCAA ATATTAAATT 120  
 50 ATGGAGCGGA AGATAGGATT TACACCTATA CCTCATTCCA GGAAGGAATG TATTCTAAGA 180  
 GTTGAATAC TCCCGCATT TATTAAATT ATGGAGCGGA AGTAGGATTT GCACCTATAC 240  
 CTCGTTCCGG GAAGGAGCTG TTTCTAAAAG TTGAACTACT ACCGCATAAA CCTGGTGGCG 300

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## (2) INFORMATION FOR SEQ ID NO: 4206:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4206:

TACTTTGTGA ATCCAGAAAA CTTTGAGGAT GTCACATAA GTGTGAATAT TACATTCCCA	60
AATCCAAATC AATATAAGT AGAGTTTAAT ACGCGTGATG ATCAAAATTAC AACACCGTAT	120
ATAGTAGTTG TTAATGTGCA TATTGATCCG AATAGCAAAG GTGATTAGC TTTACGTTCA	180
ACTTTATATG GGTATAACTC GAATATAATT TGGCGCTCTA TGCATGGGA CAACGAnnAG	240
CATTTAATAA CGGATCAGGT TCTGGTGACG GTATCGATAA ACCAGTTGTT CCTGAACACC	300
TGATGAGCCT GGTGAAATTG AACCAATCCA GGGATCAGAT CTGACCCAGG TCAGATCTGG	360
CAGCGATCTA ATCAGnAGCG GTCAGATCGG GnAGGATCAC	400

## (2) INFORMATION FOR SEQ ID NO: 4207:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 402 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4207:

AAAAAGTTGA GAAAAATGTT TGAATCAGCA AACGTTGTGC AATCGAAATT TCCACACCAT	60
CAAAACCTGC TTTAATCGCG CGTAATGTAG CATCGnGwk ACTGCTGAAT GATGCTATTG	120
ATTTTCTCAT GAGACATGGC GATAACATCG TGTtCAATC GGTGAATGCA ATGWCATAGG	180
GCTTGGTCCA TACACCTTTC CAAAATTAA AATGGCTTGA TTTGAAAAAC GACCAGCATG	240
CGCTACTGGG ATAATAGCGA GGCTACCATG TTGTTTCATC GTAGATCCCA TGTTAGTTAA	300
TCCAGGGATA CAACCATCAT GATCAATATT AAAnCATATC CAACCATTGA CCATAAGGTC	360
AATGTAACAC GCCGGTGACT TCATCCAGCT GAATAGACGC GT	402

## (2) INFORMATION FOR SEQ ID NO: 4208:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 380 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4208:

5 GAAGAGTTGC AGCAGCAGAT ACAATTATC CATTCACTCA AGCTGAAAAT GTTTGGTTAC 60  
 CAAACAAAAA TGACATCATC GAAAAAGCAA AAGAAACTTT AGAATTTTAA TACATTTTAA 120  
 AAGTTAAGCA ATTAGCCGTG ATTTTAGTCT CATTGATTAA AATGAAATnG TTAATTTACG 180  
 10 AAATCTTAGG AGGGCAAAAA CGTGGGCATT TGAATTTAGA TTACCCGATA TCGGGGGAG 240  
 GTATCAAGCA AGGTGAAATT GTAAATGGT TTGTTAAAGC TGGAGGATAC TATnGGAAGA 300  
 AGACGATGTT TTAGCTGGAG GTACAAAACC GATAAATCAG TAGTAGAAAT CCCCATCCAC 360  
 15 CAGCATCTGG TACnGGTAAG 380

(2) INFORMATION FOR SEQ ID NO: 4209:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4209:

25 AATAAACCTC AGGCTATTCA ATGGCATACA AATTTAACGA ATGAGCGATT CACTACTATC 60  
 30 GCACATCGTG GCGCAAGTGG CTATGCACCC GAGCATACTG TTCAAGCATA TGATAAGAGT 120  
 CATAATGAGT TAAAGCATC TTATATCGAA ATTGATTAC AACGTACCAA AGATGGCCAT 180  
 TTAGTTGCTA TGCATGATGA AACTGTTAAC CGTACAACAA ATGGACACGG TAAAGTTGAG 240  
 35 GATTATACCC nTGATGAATT AnAACAGTTA GATGCAGGAA GTTGTTAAT AAAAAATATC 300  
 CnAAATACGC CAGAGCAGTA TTAATGCT AAAGTACCAC TTAGGTGGAA TTAGGACGT 360  
 ATTTGGCCGA TGCCAACnTT TATATTGAAC CAAGCACCTG 400

(2) INFORMATION FOR SEQ ID NO: 4210:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 330 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4210:

50 GCCCACAACC ACAAGGCTG TAGGCTACAA ATATGGAGAC GGCGGSATT GAACCCGCGT 60

AAAAGTGATA AACAAACCAAC ATGATGCTAG TTIGATTAAG TTTCTTCTAA ACAGACTTCA 180  
AACGGCAtnG TTAGCATATC CTATTAAGGT TGAATCGCGT TAACAGCACA TAGGAAATGC 240  
5 TGTTAGGCGA TGCAGAGTGC GATTAGGCAG CTACTGCGAA ATTATTGtnT GATTTGCCAG 300  
TTATTATnAA CTGTGTGGTG TTGATGACGA 330

(2) INFORMATION FOR SEQ ID NO: 4211:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 339 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4211:

AAATCATCTT ATGACTGCTT TTTATTATAC TTTACATTTC TCGTTTCGTC AGATTCAAAC 60  
GTTTTCACCTT CGCCAAGCCA TCTTTCTTTG TGTTTGCTTT TATTTGACG TTTTAGACAT 120  
AAAAAAGAG ACCTTCGGT CTCAATGnGG CTCATCGCAT CCACTTTTTG CCTGGCAAG 180  
25 TTCTACTCTA GCGGAACGTA AGTTCGACTA CCATCGACGC TAAGGAGCTT AACTTCnGTG 240  
TTCGGCATGG GAACAGGTGT GACCTCCTTG CTATAGTCAC CAGACATATG AATGTAAAT 300  
ATACATTCAA AACTAGATAG nAAGTAAAAG TGATTTTGC 339

(2) INFORMATION FOR SEQ ID NO: 4212:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 334 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4212:

GCGATGGTTG AACATTGAC TGATATTAAA GAGTTTATGA ACCAAGTTGA GTCGCATAGC 60  
TAGTATGAAA CGTGGTGTGC GCATGGGAAC TATCAAGCTT TGAAGATGTG GACTACATG 120  
45 CGTTGAATTA GGGATCGGTA CTTTATATGA AGACGTGCTG CTTCCATTAA ATGATGATG 180  
CGATTTTGGC ATGAAGGTCA CCTnAAATGT ACATTGTTGT AATAAAATG CCTATAAAT 240  
TTTTAGCACA TAAAATAAGA GGGGCCAnCC ATTTTAGACT ATAACAACGG TTGGCTCTTT 300  
50 GAATTGTAAA AAGAAAACCA TACGCTATGn TATT 334

(2) INFORMATION FOR SEQ ID NO: 4213:

(A) LENGTH: 332 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4213:

10 CTATGATTTC ACCGAGTCTC TCGTTGAGAC AGTGCCCAAA TCGTTACGCC TTTCGTGGG 60  
 GTCGTTACCC GACAAGGAAT TTCGCTACCT TAGGACCGTT ATAGTTACGC CGCCGTTTAC 120  
 TGGGGCTTCG ATTCGTAGCT TCGCAGAGTA nACCCACTCC TCTTAACCTT CCAGCACCGG 180  
 15 GCAGGCGTCA CCCTATACAT CACCTTACGG TTTAGCAGAG ACCTGTGTTT TTGATAAACA 240  
 GTCGCTTGGG OCTATTCACT GCGGCTCTTC TGGGGCGTTA ACCCTAAAGA GCACCCCTTC 300  
 TnCCGAAGTT TAGGGGTCA nTTGCCGAG TT 332

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(2) INFORMATION FOR SEQ ID NO: 4214:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 363 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4214:

30 CGCTGGCAA CGTCTACTC TAGCGGAACG TAAGTGGCT ACCATCGTCG CTAAGACCT 60  
 TTCTTGACTT GTGACAATCG CTGTCTCTT TCTCTCCTT CGGCTCTCGC TTACTCATTT 120  
 35 AGCTCTACTA AACTCGTTGC GCTCTTTTCT CGTTTCGTCA GATTCAAACG TTTTCACTTC 180  
 GCCAAGCCAT TTTTCTTTGT GTTTACTTTT TAnTTTGACG TTTTAGACAT AAAAAAAGA 240  
 GACCTTGCGG TCTCAATGCG GCTCATCGCA TCCATTTTTT GCCTGGGCAA CGTTCTACTC 300  
 40 TAGCGGAACG TAAGTGGGT ACCATCGACG CTAAGAACCT TCTTGGAnTG TGGACAACGn 360  
 TGG 363

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(2) INFORMATION FOR SEQ ID NO: 4215:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 338 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4215:

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TTATTTGTAT TGTATAGAGA GAAATAAAAA GAnACCTTGT TTTACAAGGT TTCTAATACG 120  
 5 TATATGTTATG TAAATAACAG TTAATTATAC CGGTGGTCGG GGTGCAACCG ACACGCCACA 180  
 AGTGGAAACGG GGATTTTGTAG TCCCGCGCGT CTGCCAATTC CGCCACACCG GCTTAATGGT 240  
 AAACAAAAAA CTTCCTTTTG GAAGCAATTA TGGAGCGGAA GATAGGATT ACACCTATAC 300  
 10 CTCGTTCGGG GAAGGACGTG TTCTAAAGT TGACTACC 338

(2) INFORMATION FOR SEQ ID NO: 4216:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 15 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4216:

ACGGTGATCC CATAATGCTT GAACATCAAT TTCATCCATT AATGTTACAT GAGGTGCAGT 60  
 ATGCTTAGAG TTAACCATG CTTCGCAAT TGCTCTACGC ATAGCAGGGA TTTTTCAGT 120  
 25 TGTTTCTGGG AAGTCGCCTT CTAATGTTAC TGCTGCAGGT GCTGCAGGAG TTTCAGCAAC 180  
 TTCTTCACCT GTAGCTGAAG CAGCTGATTC ATTTGAAGCT GTTGGTGCAC CACCATTTAA 240  
 30 GTATGCATCT ACATCTTCTT TTGTAATACG ACCATTTTAA CCAGATCCAG AAACCTGCTTT 300  
 AATGnTAACA CcTnTTTCAC GTGCGTATTA CGACTGAAGG CATGCCCTAA CAGTCnGGTT 360  
 CACCACTCTC AGTTGAGAGC ACAGGGCTGC nCGCTGGCGC 400

35 (2) INFORMATION FOR SEQ ID NO: 4217:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 345 base pairs  
 (B) TYPE: nucleic acid  
 40 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4217:

45 AGGGAATCGA ATTTTCTTTC TCTTCCTCCG GGTACTAAGA TGTTTCAGTT CTCGGGTGT 60  
 GCCTTCTGAT ATGCTATGTA TTCACATATC GATAACATGA CATAACTCAT GCTGGTTTC 120  
 50 CCCATTGCGA AATCTCTGGA TCAAAGCTTA CTTACAGCTC CCCAAAGCAT ATCGTCGTTA 180  
 GTAACGTCCT TCATCGGCTT CTAGTGCCAA GGCATCCACC GTGCGCCCTT AATAACTTAA 240  
 TCTATGTTTC CATCTACAG GAAACGCGTT ATTAATCTTG TGAGTGThCT TTCGAACATA 300

55

## (2) INFORMATION FOR SEQ ID NO: 4218:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 345 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4218:

GGCGCCCTCG	TGCCAAACAG	TGCTCTACCT	CCAATAATCA	TCACTTGAAG	CTAGCCCTAA	60
AGCTATTTCG	GAGAGAACCA	GCTATCTCCA	GGTTCGATTG	GAATTTCTCC	GCTACCCCTCA	120
GTTTCATCGC	TCACTTTCCA	ACGTAATCGG	TTGCGTCTTC	CAATCAGTGT	TACCTGAACT	180
TCAACCTGGA	CCAAGGGTAG	ATCACCTGGn	TTGCGGTCTA	CGACCAAATA	CTAAACGCC	240
TATTCAGACT	CGCTTTCGCT	GACGGCTCCA	CATTACTGCG	TTAACCTTGC	ATCAAATCGT	300
AACTCGCCGG	TTGCATTCTA	CAAAAGGCAC	GCCATGCACC	CATTA		345

## (2) INFORMATION FOR SEQ ID NO: 4219:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 367 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4219:

TCTTATGACT	GCTTTTATT	ATACTTTACA	TTTCTCGTTC	CGTCAGATTG	AAACGTTTTC	60
ACTTCGCCAA	GCCATCTTTC	TTTGTGTTTG	CTTTTATTTT	GACGTTTTCG	ACATAAAAAA	120
AGAGACCTTG	CGGTCTCAAT	GCGGCTCATC	GCATCCACTT	TTGCGCTGGC	AACGTTCTAC	180
TCTAGCGGAA	CGTAAAGTTC	GnACTACCAT	CGACGCTAAG	GAGCTTAACT	TCTGTGTTGG	240
GCATGGGAAC	AGGTGTGACC	TCCTTGCTAT	AGTCACCAGA	CATATGGAAT	GTAATTTATA	300
CATTCAAAC	TAGATAGTAA	GTAAGTGGn	TTTGCTTCGC	AAACnTTAT	TTTGGTTAGT	360
CTTCGTC						367

## (2) INFORMATION FOR SEQ ID NO: 4220:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 342 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear



(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4220:

AAGAGCCCTTT	CTTGACTGTG	GACAATCGCT	TGCTTCTTTC	CTCTCCCTCG	GCTCTCACTT	60
ACTCATTTAG	CTCTACTAAA	CTCGTTGCGT	TCTTTTCTCG	TTTCGTGAGA	TTCAAACGTT	120
TTCACTTCGC	CAAGCCATTT	TTCTTTGTGT	TTGCTTTTIA	TTTIGACGTT	TTAGACATAA	180
nAAAAAGAGA	CCTTGCGGTC	TCAAATCGGC	TCATCGCATC	CATTTTTTGC	CTGGCAACGT	240
TCACTCTAGC	GGAAATAAGT	CGAACTACCA	TCGACGCTAA	GGAGCTTAAC	TTTCTGTGTT	300
CGGCATGGGA	ACAGGTGTGA	CCCCChTGGC	TATAGTCACC	AG		342

(2) INFORMATION FOR SEQ ID NO: 4221:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 337 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4221:

ACCGGATGAC	AGCCCCAGGA	TGCGATGAGC	CGACATCGAG	GTGCCAAACC	TCCCCGTCGA	60
TGTGAACCTC	TGGGGGAGAT	AAGCTGTTAT	CCCCGGGGTA	GCTTTTATCC	gTTGAGCGAT	120
GGCCCTTCCA	TGCGGAACCA	CCGGATCACT	AAGTCGGTCT	TTCGACCCTG	CTCGACTTGT	180
AGGTCTCGCA	GTCAAGCTCC	CTTATGCCTT	TACACTCTAT	GAATGATTTC	CAACCAATCT	240
GAGGGAACCT	TTTGAGCGCC	TCCGTTACCT	TTTAAGAGGC	GACCGCCCCA	GTCAAACCTGC	300
CGCCTGACA	CTGCTCTnCA	CCACGATAAG	TGGCGnG			337

(2) INFORMATION FOR SEQ ID NO: 4222:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 361 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4222:

GGCGCTTGAC	TAAAAAGAAA	TTGTACATTG	AAAACTAGAT	AAGTAAGTAA	AATATAGATT	60
TTACCAAGCA	AAACCGAGTG	AATAAAGAGT	TTTAAATAAG	CTTGAATTCA	TAAGAAATAA	120
TCGCTAGTGT	TCGAAAGACA	TCCACCAAGn	TTAATAACGC	GTTTAAATCT	TTTTATAAAA	180
GA AAAACGTTT	AGCAGACAAAT	GAGTTAAATT	ATTTTAAAGC	AGAGTTTACT	TATGTAAATG	240

ACATAGATTA AGTTATTAAAG GCGCACGGT GGGTGCCnTG GCACCTAGAA GCCCGTGAAG 360  
G 361

(2) INFORMATION FOR SEQ ID NO: 4223:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4223:

CGGTAGAATA CAACCTTGCC AAGGTTGGCG TCGCGGGTTC GAATCCCGTC TTCTGCTCCA 60  
TTATTTTGCC GGGGTGGCGG AACTGGCAGA CGCACAGGAC TTAAAACTCT GCGGTGAGAG 120  
ATCACCGTAC CGGTCGATT CGGTCCTCG GCACCATTTT AGCGCCCGTA GTCGAATTGG 180  
ATAGAGCGTT TGACTACGGA TCAAGAGGTT ATGGGTTTCA CTCCTATCGG GCGGCCATT 240  
TTTAAATTAA TTGAATAACG GGAAGTTAGC TCAGCTTGGT AGAGCACTTG GTTTGGGGAC 300  
CAAGGGTCGC AGTTCGAATC CTGTCTTCCC GATTACTCnT AAnTCCAATT AnGGGGGCTA 360  
GCTCAGTGGG GAGAGCGCTG CTTGCACGCA GGAGGTCAG 400

(2) INFORMATION FOR SEQ ID NO: 4224:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4224:

CATAATATAC TCTTAAGTGT AAAGGGGAAT TTCCTGGTA ATAATTCGCG TGTGCACCTT 60  
GAGTGACTTC TACCAATTTA TAGTCAAATT GCTTAGTTC GTTTGGTTTA ACGCCGACAC 120  
TCGCAATGT ATAATCAAAG AACTTCACAA TATTGTTGCC TAAGAAGCCT TTGAATTCAA 180  
TAGTGTCAAT TCCAGCAATT TGTTCGGCAA CAATACTTGC TGCACGGGTG AGCGCCCCA 240  
GnCAAAAGGA CCACTAGCCG GTAGAATCGA CATGTCGATA ATGTGATGTT TGCCAATAAT 300  
CGCCTATTGC ATAATGTTT GACCATTTGT TCCAAATTTA TCGTTACCGG TATGAAACCT 360  
TTCGATCCAG TTGATAAATT GAACTTCGnA AATTTGATTG 400

(2) INFORMATION FOR SEQ ID NO: 4225:

(A) LENGTH: 328 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4225:

10 GGGTCAATT TCTGCATACC AATCGATGCC AGCTCTATTT CTGACAATAT CCATATAITTT 60  
 TGAAATTTTC TCTAATTCIT TGCCACTAAC CTTTTCACCA TTCAACCAAA ATTGATCCTG 120  
 TGTTAACTGG TCGTTAAAG TGACTTTCGT TTCAGTGTA AATTTTCTA ATGTAACAGA 180  
 15 TATGCTATTA TTCATTGGAA TGATTAGTGC TTCATCTTTT TTACCCCAAT ATTTATnAG 240  
 TGCAATATTC GTATGTGCAC GTGCTTTGCC ACTnnTAATC AACGCATTAA CCTCTAAAT 300  
 TCTCAATCCA AGTATGTGCT GCACCAGC 328

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(2) INFORMATION FOR SEQ ID NO: 4226:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 325 base pairs  
 (B) TYPE: nucleic acid  
 25 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4226:

30 TGACGGGTTG GAACCGCCGA CCTCTGCTT GTAAGGCAGA TGCTCTCCCA GCTGAGCTAA 60  
 TTCTCCGATT TAAACTGCC TGGCAACGTT CTACTCTAGC GGAAnGTAAG TTCGnACTAC 120  
 35 CATCGACGCT AAGGAGCTTA ACTnCTGTGT TCGGCATGGG AACAGGTGTG ACCTCCTTGC 180  
 TATAGTCACC AGACATATGA ATGTAATTTA TACATTCAA ACTAGATAGT AAGTAAAGT 240  
 GATTTTGCTT CGCAAAACAT TTATTTGAT TAAGTCTTCG ATCGATTAGT ATTCGTGAGC 300  
 40 TCCACATGTC ACCATGCTTC CACCT 325

40

(2) INFORMATION FOR SEQ ID NO: 4227:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 331 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4227:

GCGCAACTCA CACAAACAGG TGGCAATCAC TCTGAACAAA GTGCGGCAAn TnTTCAACA 60

55

AACCTTACGC AAGAAGCAGC TGACGGTTTA TTAGTCCAG TCATTGGTCG TGGATAAAGA 180  
 AATTCAGGA ACTGCTGAAG TTTTAAGTAG ACGAACTAAA AACAACTCTA TATTAGTTGG 240  
 5 AGAAGCTGGT GTTGGTAAAA CTGCGATTGT TGGAAAGTTT AGCACAGGCA ATCGTTGGAA 300  
 GGAAATGTAC CAGCAGCAAT CAAAGACAAA G 331

(2) INFORMATION FOR SEQ ID NO: 4228:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 333 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4228:

20 AGAGGTCGTG TGCCCTACCG CTGGGTATA GCCATTAATA ATAAGGGCGG CTGAAGGGGA 60  
 TGAACCCCTC GAATGTCGGA ACCACAATCC GATGTGTAA CnCTTCACCA CAGCCGCCAT 120  
 GGCAGGGGCA GTAGGAATCG AACCACACCC AAAGTTTGG AGACCTCTAT TCTACCGTTG 180  
 25 AACTATGCCC CTATTAAAA TAATAAATGG AGGGGGGCG AGTCGAAC TG CCGAACCCGA 240  
 AGAGCGGATT TACAGTCGCG CGCGTTTn CACTTCGCTA CCCCTCCATA AATGGTGCCG 300  
 GCCAGAGGAC TTGnAACCCC CAACCTAATG GTT 333

(2) INFORMATION FOR SEQ ID NO: 4229:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 35 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4229:

40 CTCTTACTTT GTAAACCAA TCTTAAATTA AAATATTGAA AATGCAATGn ATCCTTAATA 60  
 TTTTATTAAA CCTATAATTA CTATTAAAA ATAACACACA ATATTCTATA AGTTTTAAAA 120  
 45 ATATTCTGTT TTATCACCTA CTATTAGTGG AAAAGTACAA TTGCAATTGT ATATAGTTTG 180  
 CATAACGCTT CAAAAGTAAT TTCTTTTTTG TTTAGTTCAA AAAAAATTAG AGGTGATGTT 240  
 ATATGAATAA CGGTTTTTTC AATAGCGACT TTGATTCAAT TTTTCGAGGA TGATGAAGA 300  
 50 TATGCAAGST TCAATCAAG TCGAAACAA AAGTACTATA TnATGGTAA GGAGTTTCAC 360  
 CTGAGGACTG GCGCACTn ACACACCAGG TGGCCATCAC 400

55

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 339 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4230:

CATTAACGGG CTCTGACTAC TTGTAAGCAC ACGGTTTCAG GTTCTATTTC ACTCCCCCTTC 60  
 CGGGGTGCTT TTCACCTTTC CCTCACGGTA CTGGTTCACAT ATCGGTCACAT AGAGAGTATT 120  
 TAGCCTTAGG AGATGGTCTT CCCAGATTCC GACGGAATTT CACGTGCTCC GTCGTACTCA 180  
 GGATCCACTC AAGAGAGACA ACATTTCGA CTACAGGATT ATTACCTTCT TTGATTATC 240  
 TTTCAGATG ATTGCTTAA TGTCGTCTT TGTAACCTCC TATAGAGTGT CCTAsAACCC 300  
 CAACAAGCAA GCTTGTGGT TTGGGnTCTT GCCGTTTCG 339

(2) INFORMATION FOR SEQ ID NO: 4231:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 349 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4231:

GAAGTCATAT GCATACACTT GGTATCATT ATTCATACGT TCAATCGCAT CTGTAACTG 60  
 AATTTCGITA CTGCGCCTT CTTTTCGCT TTTTAAATAA TCGAAAAATT CAGGCGTTAA 120  
 TACATAACGT CCCATAATAG CTAGGnTTGA TGGTGCCGTA CCTTGTCGTG GCTTTTCAAC 180  
 AAACCTTTTC ACTTCAGACT GACGTCCGTh TTTAGTTAAT GGGTCAATAA TTCCATAACG 240  
 ATGAGTATCT GCTTCGGAA CTTCITGGAC ACCTATAACT GAGTGCCCTG ThTCTTCATA 300  
 AACGTCAATC AACTGTTTCA CTGCTGGCAC TTCAGAGTCA ACAATATCG 349

(2) INFORMATION FOR SEQ ID NO: 4232:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 377 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4232:

CCAGGATGGC ATGACCGACA TCGAKGTGCC AAACCTCCCC GTCGATGTGA ACTCTTGGGG 120  
 5 GAGATAAGCC TGTATCCCC GGGGTAGCTT TTATCCGTTG AGCGATGGCC CTTCATGCG 180  
 GAACCACCGC ATCACTAAGT CCGTCTTTTC ACCCTGCTCG ACTTGTAGGT CTCGCAKTCA 240  
 AGCTCCCTTA TgCTTTTACA CTCTATGAAT GATTTCACAC CATTCTGAGG GAACTTTgAg 300  
 10 CGCTCCGTT ACCTTTTAGG AGGCGACCGC CCAGTCAAAC TGCCCGCCTG ACATGTCTC 360  
 CCACCACGAT AAGTCTG 377

(2) INFORMATION FOR SEQ ID NO: 4233:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 355 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4233:

GGCTAGCCTC AAGTGATGAT TATTGGAGGT AGAGCACTGT TTGGACGAAG GGCCCTCTC 60  
 25 GGGTTACCGA AGTTCAGACA AACTCCGAAT GCCAATTAAG TTAACTTGG GAGTCAGAAC 120  
 ATGGGTGATA AGGTCCGTGT TCGAAAGGGA AACAGCCAG ACCACCAGCT AAGGTCCCAA 180  
 30 AATATATGTT AAGTSGAAAA GATGTGGCG TGGCCAGAC AACTAGGATG TTGGCTTAGG 240  
 AAGCAGCCST CATTATLAGA GTGCGTAATA GCGCACTAGT CAGTGACAC TGGGGGAAAA 300  
 GGGTACCGGG GCTGAACATA TTACCGAAGC TGGTGGGTTG TCCTTTGAC AnTtn 355

35 (2) INFORMATION FOR SEQ ID NO: 4234:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4234:

45 ATCCGCTCC CGCAATATTT TATAGGCTC GTAGGTGAGC GntTAACAGC CCTGCCTGTC 60  
 ACGCAGAGAT CGCGGGTTTC ATTCCGTCG AGACCGCCAT CATTACATTT TTATTATGGT 120  
 TCAGTAGCTC AGTTGGTAGA GCAATGGATT GAAGCTCCAT GTGTGGCAG TTGCACTCTG 180  
 50 TCCTGAACCA TTTCTAGCC GGCTAGCTC AATTGGTAGA GCAACTGACT TGTAATCAGT 240  
 AGGTTGGGGG TTCAAGTCCT CTGGCCGGCA CCATTATGAG AGGGGTAACG AnTGGGCTAA 300

55

TTAATAATTT TAATAAGGGG CATAnTTCAA CGGTAnAATA

400

(2) INFORMATION FOR SEQ ID NO: 4235:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 341 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4235:

ATGCCATGTT CACCTTGTTT AAAATCAAGG TTGTAAATGT TTCTTGTTGT CACGATAATA 60  
 GGCCTAATAT CACTCTTGC ATGATTGCGG ATGTAGTCTA AATCAAAGTT GATTATAAAA 120  
 TCACCTTCTT TAACTnTTG ACCTTCCTCA ACATGTAAAG TAAAGCCTTC TCCGTTTAAT 180  
 TTAACAGTGT CTAACCCGAT GTGGATTAAT AGTTCTAAAC CACTATCTGA TACAAGACCA 240  
 ATTGCATGnT TTGTGGGAA AATCATTTGT ACTTTACCGT TGAATGGTGC ACGAACTTCA 300  
 CCTTGTGAGG TTGATAGCG ATACCGTCAC CCATGCATTT T 341

(2) INFORMATION FOR SEQ ID NO: 4236:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4236:

GTGATGCAG CCGTTGAGC TCTAAACCAA CTGAGCTAAA GGTCTAAAT ATAATTTTAC 60  
 AACTAATAAA TAGTGGCGGT GGAGGGGATC GAACCCCGA CCTCACGGGT ATGAACCGTA 120  
 CGCTCTAGCC AGCTGAGCTA CACCGCCTTA TATAGTTTGT AAATAATATG GTGGAGACTA 180  
 GCGGGATCGA ACCGCTGGAC CTCTCGGTG CAAAGCAGGC GCTCTCCAG CTGAGCTAAG 240  
 CCCCATAAT AATTACAGTA TATCGGGAAG ACAGGATTCG AACCTGCGAC CCCTTGGTCC 300  
 CAAACCAAGT GCTCTACCAA GCTGAGCTAC TTCCCGTATA ATTAACGnGC CCGTAGGAGT 360  
 TGAACCCATG AACCTnTTGA TCCnTAGTnC AAACGGTCTA 400

(2) INFORMATION FOR SEQ ID NO: 4237:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 376 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4237:

5 nAnTTCTTGA CTGACATCA CTGAAATTG AATGGACATG GTCCACCAGG TCATATACTC 60  
 TAATCCATGG GTCGCCGATA CCTTCAACGn ACAACATCTA CACCACTATT TCTAATACAG 120  
 AATCTTCTC CTGCACTACC GTTAATAAAT GCCTTACCAC TTGTCGCACC ATAGAATGAG 180  
 10 ACGTTACCAG CAATAATTTC ATTTTGTGCT TCTTCAAAAG GTGCTTTGAC AATGACCGTA 240  
 CCACCAGATA ATCTTTTACC AACATAGTCA TTGCATCTC CAGTATGATG AATCATTAAAG 300  
 CCTTTGGTG CATATGCTGC AAGACTTTGA CCAGCATGAC CATTCTGATA AACATTAAIT 360  
 15 GTATTTTCAG GAAGTC 376

## (2) INFORMATION FOR SEQ ID NO: 4238:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 335 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4238:

25 CGATTTAAAG CTAAGCCCAT TTTCGCTCTT TCTCCATAGC CTAACCAAGC AATACGTGAT 60  
 GGTATGCTT GATATGAAAT TTTTCTCTCA GCTAAATCAA GCCATCTTAA TAACTTTTC 120  
 30 TTTTCTGGGA AAAGTTTGGC CATTCTCTCA TCCGCACGCT CGATATCTTT TGGATCACCA 180  
 CTCACGCAG CAAAGCGGAA TGGCCCTTTA CCTTCACAGA ATAATGGTCT AATGTAAGCT 240  
 35 GGTACAAAG CTGGGAAGTC AnAAAGCATT TTTCACCTCG TATTGAAGGC TACTTGACGA 300  
 TATGnTACCA TAATCAATGC TACAGCGCCA CGTTG 335

## (2) INFORMATION FOR SEQ ID NO: 4239:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 348 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4239:

45 CCACAnTTAC AAGCACTAC TGAAGGCGCT GTATTTATTA AAGGTGGCGA CGGTTTGTAT 60  
 50 TTCGACACG TAGAAGATT TATTCAAAAC CCGCCACATG GGGCAACGGT TGCATGGCAT 120



TTACCTAATG GTCAAGGTAC GCGTAATGTT GAAGTTCCAG TCAAAGITTA TCCAGTTGCT 240  
 AATGCAAAAGG CGCCATCAGC TGATGTGAAA GGTCAAAATT TGCTGTGGA CGGATGCGAT 300  
 5 GAACTACATT ACATTGTCC AnTACAACAC AGATnGTATC ACTGCAGC 348

(2) INFORMATION FOR SEQ ID NO: 4240:

(i) SEQUENCE CHARACTERISTICS:  
 10 (A) LENGTH: 395 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4240:

TTGATGTTAA AGATTAGCA AGGGGCGAGA GAAGTGGAGA AGAGGTTGCC AAACGAATGG 60  
 20 AACGTGCTTC TGTATTGGCC CAAGTAGATA TTCATCGTGC AGCAACACAT AATAAAGGTG 120  
 TTATGAATGG CATACATGCT GTTGTTTTAG CAACAGGAAA TGATACGCGT GGTGCAGAAAG 180  
 CAAGTGCACA TGCATTACGC GAGTTCGTGA CGACAGTAT CGTGGTATTG CTACATGGCG 240  
 25 TTACGATCAA GATCGTTCAA CGATTIGATT GGTACATTGG AAGTGCCTAT GACATTGGCA 300  
 ATCGTTGGCG GTGGGTACAA AAGTATTACC AATTGCTAAG CCTTCATTAG GAGnTACTAA 360  
 ATGGTAGAGT CCGCCCCAAG AATTAnGnCC CTGTA 395

30 (2) INFORMATION FOR SEQ ID NO: 4241:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 331 base pairs  
 35 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4241:

40 ACTAATGATT TATTATGTAG TGGTCTTTG TCATTAGCCA CAGCTATTGT GTACTTAAAA 60  
 ATAGGAATGC ATGAGTGCAA CTCTAnAnGn AGCATACTAA TTICTAAAGA AAAAGTATTT 120  
 45 CTTTATGTTG GGGCCCCGCC AACTTGCAIT GTTTGTAGAA TTCTTTTGG AAATCTTTTA 180  
 TGTGGGGGCC CCGCCAACTT GCATTGTTTG TAGAATTTCT TTTCGAAAT CTTTATGTTG 240  
 GGGCCCCGCC AACTAATTCC AATATATCAT TGTAGAGCTT AGSTCATTGA TTTTGTGGCTC 300  
 50 GGACTTTTAT GGCATATGA ACCATGTAAA T 331

(2) INFORMATION FOR SEQ ID NO: 4242:

55

(A) LENGTH: 389 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4242:

10 TGCATTGCAT TATTGTACTG CGTAATTGTA CTTGGCTTTT TACCTTCAGT GCTTACTGGA 60  
 TCATCTAAAT GATTTTITAG TGTGATTAC TCAGTTTAT CCGCTTTTGT GAAAAATGGAC 120  
 TCTTGTAATT CTTCAGTACT ACCATCATTG TAAGTTACTG TCACAGGAAT CGTCGTTGTG 180  
 15 CTACACCCAG CTAATTAGT AGGCATTGCT GTGCCATTTT TAATCGTTGC AGTACGTTTA 240  
 TTAGCAACTT GAACTGCATT GTTAATTTCA GCTGCTGTTA CATTGAACCA ATAATCTTTC 300  
 20 ACAATTnCAC TTGTGTTGAC AGATGAGnGG CGGTGCAGTA AGGACTGGAT ACACCTACGAG 360  
 TGACCGGACT GCTTCGGGnA ATGTGATGA 389

(2) INFORMATION FOR SEQ ID NO: 4243:

25 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 322 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4243:

ATACGCATGT TAACGATCGA ATGCTTAATG TCCCGGGAAA TAAATCTATC ATAAGTTACT 60  
 35 TTAATGAAGT TGTCTCACGA CAAGGTAATC ATGTTGCGCT ATCATGAATG ATTGACAAT 120  
 GACGTATGAA CATTACGCAA CTATGTGGAT GCCATTGCGC ACATGCTCCT ATCAAATGGT 180  
 40 GTGGGCAATG GTCAACGGGT TGCCTTGTTT ACAGAACGTT TTTTGGAAAT GATTGCGGCG 240  
 ATGTGTCGCA CAGTTAAAGT AGGTGCATCT TATATACCTA TCGATATTGA TTTTCCGAAT 300  
 AAACGACAAG GTGCAATTTT GG 322

45 (2) INFORMATION FOR SEQ ID NO: 4244:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 339 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4244:

55

CAGTTCTCCG GGTGTGCCTT CTGTATATGC TATGTATTCA CATATCGATA ACATGACATA 120  
 5 ACTCATGCTG GGTTCCTCCA TTCGGAATC TCTGGATCAA AGCTTACTTA CAGCTCCCCA 180  
 AAGCATATCG TCGTTAGTAA GTCCTTCAT TGGCTTCTAG TGCCAAGGCA TCCACCGTGC 240  
 GCCCTTAATA ACTTAATCTA TGTTCCACC ATTTTATAA GTCAAACGTT AACATGAAGT 300  
 10 TACGTTCTTT TATAAAAAGA TTAAACGCG TTATTAATC 339

(2) INFORMATION FOR SEQ ID NO: 4245:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 358 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4245:

CCATTAACGG GCTCTGACTA CTTGTAAGCA CACGGTTTCA GGTTCTATTT CACTCCCTTT 60  
 25 CCGGGGTGCT TTTACCTTT CCCTCAGGT ACTGGTTTAC TATCGGTCAC TAGAGAGTAT 120  
 TTAGCCTTAC GAGATGGTCC TCCAGATTC CGACGGAATT TCACGTGCTC CGTCGTACTC 180  
 AGGATCCACT CAAGACAGAC AACATTTTCG ACTACAGGGA TTATTACCTT CTTTGGATTC 240  
 30 ATCTTTCCAG ATGATTCGTC TAATGTCGTC CTTTGTAAGT CCGTATAGAG TCTCTACAA 300  
 CCCAACAAAG CAAGCTTGTT GGTnTTGGGC nACTTCCCGG TTTGCGTTTCG GCCGcAA 358

(2) INFORMATION FOR SEQ ID NO: 4246:

35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 338 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4246:

45 AAAGAGACCT TGCGGTTAGA TCGGGCTCAT CGCATCCATT TTTGCTCTGG CAACGTTCTA 60  
 CTCTAGCGGA ACGTAAGTnG AnCTACCATC GACGCTAAGG AGCTTAACCT CTGTGTTCTGG 120  
 CATGGGAACA GGTGTGACCT CCTTGCTATA GTCACCAGAC ATATGAATGT AATTTATACA 180  
 50 TTCAAACTA GATAGTAAGT AAAAGTGATT TTGCTTCGCA AAACATTAT TTTGATTAAAG 240  
 TCTTCGATCG ATTAGTATTC GTCAGCTCCA CATGTCACCA TGCTTCACC TCGGAACCTA 300  
 55 TTAACCTCAT GCATCTTTGA GGGGnGCTTG ATAACCGA 338

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 331 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4247:

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CCCCGGGTAG CTTTATCCG TTGAGCGATG GCCCTTCCAT GCGGAACCAC CGGATCACTA      60
AGTCCGTCCT TCGACCCCTGC TCGACTTGTA GGTCTCGCAG TCAAGCTCCC TTATGCCTTT      120
ACACTCTATG AATGATTTC AACCATTCTG AGGGAACCTT GAGCGCCTCC GTTACCTTTT      180
AGGAGGCGAC CGCCACGTA AACTGCCCGC CTGACACTGT CTCCCACCAC GATAAnGGCG      240
GGGGTITAGAA AGCCAACACA GCTAGGGTAG TATCCACCA GCGCTCCACG TAACTAnGCG      300
TCACGTTTCA AAGnTCTACC TATCCTGTAC A                                     331

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(2) INFORMATION FOR SEQ ID NO: 4248:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 371 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4248:

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ATAATCATAC AGATGGCAAT ACAACAGCAA CTGAGACAGT GTCAAAACGT AATAATAATG      60
ATGTAGTGTC GAATAATACC GCATTAAATG TACCAACTAA AACAAATGAA AATGGTTCAG      120
GAGGACATCT AACTTTAAAG GAAATTCAG AAGATGTTGC TCATTCTTCA AATAAACCAG      180
AGCTAGTTGC AATTGCTGAA CCAGCATGCT AATAGACCGA AAAAGAGAAG TAGACGTGCG      240
GCACCGGCAG ATnCTTAAAT GCAACTTCCA GCCAGATCCA GCGGCTGCAG CGGTAnGGAA      300
ACGGTGGTGC CACCAGTTTG CCAATTTACA GCGCCCATAT TACGCCAACA ACTGGThCCC      360
TAATGCCCAA T                                     371

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(2) INFORMATION FOR SEQ ID NO: 4249:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 357 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

AATTGCATGG CATAACATCG GCGATTAAAA GATGGACGTT TTGATGATGT ACAACAAGAC 60  
 5 ATTGAAGCAG TGGTGAAAGC TGCGAAGGTC ACACAGTAAA AGTGATTATT GAGACGGTAT 120  
 TGGTTGGACCA TGACGAAATT GTAAAAGCGA GTGAATTAAAC AAAAGCGGCT GGTGCGGACT 180  
 TCGTTAAAAAC TTCAACAGGT TTTGCAGGTG GCGGTGCGAC TGCAGAAGAC GTTAATTAAT 240  
 10 GAAAGATACA GTAGGTGCTG ATATAGAAGT AAAAGCTCAG GTGGCGTACG TATTnTAGAA 300  
 GTTTCATGA AnGGTTGAAG CAGGTGCGAC ACGTAnTGTT GCGAGCGCAG CGTTCAA 357  
 (2) INFORMATION FOR SEQ ID NO: 4250:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 352 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4250:  
 25 GAGCCCAAC CAACAAGCTT GCTTGTGGG nGTTGTAGGA CACTCTATAC GGAGTTACAA 60  
 AGGACGACAT TAGACGAATC ATCTGGAAG ATGAATCAAA GAAGTAATA ATCTGTAGT 120  
 CGAAAATGTT GTCTCTCTTG AGTGGATCCT GAGTACGACG GAACACGTGA AATTCCGTCG 180  
 30 GAATCTGGGA GGACCATCTC CTAAGGCTGA ATACTCTCTA GTGACCATA GTGAAGnAGT 240  
 ACCGTGAGGG AAAGGTGAAA AGCACCCCGG GAAGGGGAAG TGAATAGAA GCTGGAAGAC 300  
 GGTGTGCTTA CAAGGTAGTC AnAGCCCGTT AATGGGTGAT GGCGTGCCTT TT 352  
 35 (2) INFORMATION FOR SEQ ID NO: 4251:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 331 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4251:  
 CATTTACTGC TTAACCTTGC ATCAnATCGT AACTCGCCGG TTCAATTCTAC AAAAGGCACG 60  
 CCATCACCCA TTAACGGGGT CTGACTACTT GTAAGCACAC GGTITCAGGT TCTATTTCAC 120  
 50 TCCCTTCCG GGGTGCTTTT CACCTTTCCC TCACGGTACT GGTTCATAT CGGTCACTAG 180  
 AGAGTATTIA GCCTTAGGAG ATGGTCCTCC CAGATTCCGA CGGAATTICA CGTGCTCCGT 240  
 55 CGTACTCAGG ATCCACTCAA GAGAGACAAC ATnTTCGACT ACAGGATTAT TACCTTCTTT 300

## (2) INFORMATION FOR SEQ ID NO: 4252:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4252:

TATTGATAT	TTTGTGCATT	GCAGTCAAAC	CATGGCGGAA	ATGGAACCAA	TACCATTGCT	60
AATTTTTTCT	GTGTATGTAA	GGGCTCTAAC	ATATTCCTAA	ATTGATCAAA	TAGTTCTnGC	120
CTTGATCTCG	CAAATGTTTT	GTAGTCTGCA	TGCAATGTGA	GTGCTTGATG	AATTTTGACC	180
ACAAATTCAA	ATGTATCAGG	CGTTCTTTTT	ATCCATTTCa	ATATATTTCT	TTCCGGTTGT	240
ATCGCATAGT	ATGTCGCATC	TAATTGCGAA	CCGGAAAATG	TCCAGCATAT	GTTTTAAGGT	300
TATCGGTTTG	GGGTTCTAAA	TCTGCATATA	ATGAATAGTG	ATCACCCCAA	CCTGTTAAAT	360
CCGATGGTTA	TCCaATGAT	GATCACCATG	TCATCaaACC			400

## (2) INFORMATION FOR SEQ ID NO: 4253:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 327 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4253:

AAAGGTATCA	AAGATGTTAA	AGTTACTTTA	TTAAATGAAA	AAGGCGAAGT	AATTGGnACA	60
ACTAAAACAG	ATGAAAATGG	TAAATACTGC	TTTGATAATT	TAGATAGCGG	TAAATACAAA	120
GTTATTTTTG	AnaAGCCTGC	TGGCTTAAAC	ACAAACAGTT	ACAAATACAA	CTGAAGATGA	180
TAAAGATGCA	GATGGTGCGG	AGTTGACGTA	ACAATTACGG	ATCATGATGA	TTTCACACTT	240
GATAACGGAT	ACTTCGAGGG	GATGACATCA	GACAGCGATT	CAGACTCCAG	ATAGTGACTC	300
AGnCACGCAC	TCAGACTTCA	GACAGCG				327

## (2) INFORMATION FOR SEQ ID NO: 4254:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 330 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4254:

5 AGATGACATT AAATAGCATC TCCTCGTGTT GATTATTTTG GTTGGCTGAC CAATATTTAT 60  
 TCTAGCACGT AGAGATGCAT TTTTGTGAC AATGGTAGAA CCTTTCTGA ACCATACGCA 120  
 TAGGATTGTh CThTTTTACA ATTAAGAGC CAACCGTTGT TATAGTCTAA CAATGGTTGC 180  
 10 CCTCTTATT TATGTGGCTA AAAATTATA GGCAATTTA TTACAACAAT GTACATTTAA 240  
 GGTGACCTTC ATGCCAAAT CGCATCACT ATTTAATGGA AGCAGCACGT CTTCATATAA 300  
 AGTACCGATC CCTAATCCA ACGCATGThG 330

(2) INFORMATION FOR SEQ ID NO: 4255:

(1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 344 base pairs  
 (B) TYPE: nucleic acid  
 20 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4255:

25 ATTAGTGATT GTAAAAAAGT AAAACTATTC TTGGGAGTCG GACATAAATC AATGCTAGA 60  
 CTCATATAGT TTGTATTTGG CAGTAGTTGA GGGGGCCCCA ACATAAGAA ATACTTTTTC 120  
 30 TTTAGAAATT AGTATTTCTT ATACATGAGT TTTACTCAGG ATATCCTATT TTTAAATACA 180  
 CATTAGCTGT GTTTAATGAT AAAGAACCAC TACATCATAA ATCTTTAATG GTTCTTTATC 240  
 AATTCCTTCC CCCCTCTCAT GTTTGTATC TTTAAATCAA TATAATTCAA AAAAGGGTCG 300  
 35 AAGATATGAn ATCACACTCT CGACCTThn TTGTACTAAT TTAA 344

(2) INFORMATION FOR SEQ ID NO: 4256:

(1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 323 base pairs  
 40 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4256:

CCAGTAATAT CTAATAGT TGGATATTTA ACTTTCGCAT TAATTTCAAT ATTAATATGC 60  
 50 GTTACCGCGA CAAGnCATnA CACAACATAC ATAATAAGAT TGGCTAAAAA GATATAGTTA 120  
 AAGCTAAATT CTGCGACAAA GCCGCCATT GCAGCACCGA CAGCCACACC AATATTTTGC 180  
 55 GCTAAGTATA TCGATTAA CGTTGTCTT CCGCCATTG GCCACACTGC TCCAGCCATA 240

TACCAAGGCC ACCCGTGGAn AGA

323

## (2) INFORMATION FOR SEQ ID NO: 4257:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 369 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4257:

GCTGACTTTC	CACCAGCCTC	TGTGTTGGGG	CCCCGACTAT	TTTGAAGAG	AGCGTGTAC	60
ACGGTCATTG	TTTACAGTC	AACTACTGCT	AAAATAAAAT	TAACGAGCTT	AGGGCTTGT	120
TTTCTGTC	AAGCTCGTTA	AATCACATAT	GATAATTAAT	TATGCCAAC	CACGATATCT	180
AGCTGCTTCT	GCTGACGTT	TAATACCTAT	GGATATATGC	TGCATCTGC	ATATCTATT	240
TTGGTTTTG	AGACAATTCG	TAAATCGTAT	CAATGCCGC	TTCTAATTTT	TnCAGTGCG	300
TTTTCGATTG	AACTTCTTCT	nGCAGGACCA	ATAATAACCT	TGGATTATTT	TGTGACCCAT	360
GCAGAGTGA						369

## (2) INFORMATION FOR SEQ ID NO: 4258:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 335 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4258:

CGTTTTTCAA	AATCATTGGA	TGCATCGATA	AATAGTACGT	TGTCGTCTTG	TTGGGACAT	60
TTTTTAAATA	CTAAAAATACA	TGTTGGAATA	CTTGTCCTCAT	AGAAAAATTT	GGCTGGTAAC	120
CCAATCACGG	CTTCTAAGTA	GTTCTTTTCT	TCTATTAAAT	AGCGACGAAT	CACACCTTCT	180
GCAGCACCCAC	GAATAATACA	CCATGnGGAG	TACGACGCCA	nGTACCTTCA	TCGTCTAGTA	240
ATGTACCAGT	GTTGAATAAA	GCAAAGTCTG	CTTTGATTTT	GGCGCAACTT	GCCGTAACCA	300
CTGAATCGTT	CATCATTTCA	AATTGAACT	GCTGT			335

## (2) INFORMATION FOR SEQ ID NO: 4259:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 324 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double



(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4259:

5    ATTTGCGTAC CTTACGACCG TTATAGTTAC GGCGCCCGTT TACTGGGGCT TCGATTGTA    60  
      GCTTCGCAGC hACAACCACT CCTCTTAACC TTCCAGCACC GGGCAGGCGT CACCCATATAC    120  
      ATCACCTTAC GGTTTAGCAG AGACCTGTGT TTTTGATAAA CAGTCGCTTG GGCCTATTCA    180  
 10    CTGCGGnTCT TCTGGGGGTT AACCCATAAG AGCACCCCTT CTCCCGAAGT TACGGGGGTCA    240  
      TTTTGCCGAG TTCCTTAAGC AGAGTTCGCT CGCTCACCTT AGAnTTCTCA TCTTGACTAC    300  
      CTGTGTCGGT TTGCGGTACG GGCA    324

15    (2) INFORMATION FOR SEQ ID NO: 4260:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 400 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: double

(D) TOPOLOGY: linear

25    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4260:

AAGCGGTTGT TAGACAATGC ATTAAGAAAA ATTAAGCGG AGTTTACTTT TGTAAATGAG    60  
 CATTTGATTT TTGAAAATA AAGCAGTATC GGGCGCTTGA CTAAAAAGAA ATTGTACATT    120  
 30    GAAAAC TAGA TAAGTAGTA AAATATAGAT TTACCAAGC AAAACCGAGT GAATAAAGAG    180  
      TTTTAAATAA GCTTGAATTC ATAAGAAATA ATCGCTAGTG TTCGAAAGAC ACGAGCAAGA    240  
      TTAATAACGC GTTTAAATCT TTTTATAAAA GAAAACGTTT AGCAGACAAT GAGTTAAATT    300  
 35    ATTTTAAAGC AGAGTTTACT TATGThAATG GAGCAITGAA AAThATGAAA ACGAGCCCGT    360  
      ATGTGGAGCG TTTGGACTTA TAAAAATGGT GGGAAACATA    400

40    (2) INFORMATION FOR SEQ ID NO: 4261:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 334 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: double

(D) TOPOLOGY: linear

50    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4261:

AATTAAATGIG CAGATTGGGG TGGACGACG ATAAAGAAAT ACTTTTCTA TAGAAATTAG    60  
 TATTCTTAT GCATGAGTIT TACTCAGTAA TTCTATTITT TAAGhACACA TTAGCTGTGG    120

55

CTCCCCTGAG AAGTTTAAAA TTTTATATGT TGGCTTGTTA TGTTAAGGGA ATTAACATGG 240  
 TTGTCTTGTT TATATTATGT GATTCAAACA TTACTAGTCT TGGTAAATCT AATTCGTAAA 300  
 5 ATGCTAAATC TAACCATCTA TTAAATTAA AAC 334

(2) INFORMATION FOR SEQ ID NO: 4262:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 330 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4262:

TTTCGGTCAT AITCAAACGT TITCACTTCG CCAAGCCATT TTTCTTTGTG TTTACTTTTT 60  
 20 ATTTTGACGT TTTAGGCATA AAAAAAGAG ACCTTGGCGG TCTCAATGCG GCTCATCCGA 120  
 TCCATTTTTT GCTGGGCAAC GTTCTACTCT AGCGGhAGTA ATTGGGCTAC CATCGTCGCT 180  
 25 AAAGACCTTT CTGACTTGT GACAATCGCT TGCnTCTTTC CTCTCCTTCG GCTCTCGCTT 240  
 ACTCATnAG CTCTACTAAA CTCGTTGCGC TCTTTTCTCG TTTCGTCAGA TTCAAACGTT 300  
 TTCACCTCGC CAAGCCATT TTTCTTGTGT 330

30 (2) INFORMATION FOR SEQ ID NO: 4263:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 339 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4263:

GAGGTATACC CCGGACGGC TGAAGGGGAT CGAACCCCTAC GnaATGTCGG AACCACAATC 60  
 CGATGTGTTA CCACCTTACC ACAGCCGCCA TGGCAGGGGC AGTAGGAATC GAACCCACAC 120  
 45 CAAAGGTTTT GGAGACCTCT ATTCTACCGT TGAACATGCG CCCTATTAAA AATAATAAAT 180  
 GGAGGGGGGC AGATTGGAAC TGCCGAACCC GAAGAGTCGG ATTTACAGTC CGCCGCGTTT 240  
 AGCCACTTCG CTACCCCTCC ATAAATGGTG CCGGCCAGAG GACTTGAACC CCCAACCTAC 300  
 50 TGATTACAAG TCAGTTGCTC TACCAATTGA GCTAGGCCG 339

(2) INFORMATION FOR SEQ ID NO: 4264:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 351 base pairs

55

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4264:

	GTATTTCAAA GTAAAAATTAC ATGTTAATAC GTGnTTAATG GCGGAGACTC CTGAGGGAGC	60
10	AGTGCCAGTC GAAGCCGAGG CTGAGACGGC ACCCTAGGAA AGCGAGCATT CAATACGAGA	120
	TnTnATGAAA TAGAGAACAG CAGTAAGATA TTTTCTAATT GAAAATTATC TTAATGCTGT	180
	TTTTTAGGGA TTTATGTCCC AGCCTCTTAC TCTAATTATA TTCATATCA ATTAGACAAA	240
15	ATGGCCATT TCAATATCA CGCGTGTGTT CTGACCTTGA ATATAATTAT TATAATTCTC	300
	TTTTTGAAAA ATCAGTTAAC ATTAATTAG ATGTACCGTA TTTTAAACAC T	351

(2) INFORMATION FOR SEQ ID NO: 4265:

20

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 346 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4265:

30	ATTTCACCT TAAACCTGC TTCTTGGCT TTTGCATAT AATGTTGCGA TTGTTCTATT	60
	GTAAATACAC CTGTTTACA GAAAATATCC GCAAAGTCTG CATATTGTTT TACTTCCGGA	120
	AGTAACGCAA TCATTCTTC TAAAAATGCC TCATTGAAC TTGCCTCTTT AGGTACAGCA	180
35	TGAGGCCCTA GAAAAGTATG TTTCATGTCT AAATCATATT TCTCAGTAA ACnGTTAGAC	240
	ACTTTCAATT GCTTCAGTTC ATTTTCTCTA TCTAATCCAT AAACCACTCT TGACTITCAA	300
40	CTGCAGTCAC GCGGTGTTn AATCCATAGT AAGACAAAnC ATGACT	346

(2) INFORMATION FOR SEQ ID NO: 4266:

45

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 347 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4266:

	TCAAACGCTC TATCCAATTG AGCTACGGGC GCATATGTTT TTATTGAAAA TGGTGCCGAG	60
55	GACCGGAATC GAACCGGTAC GTGATCACTC ACCGCAGGAT TTTAAGTCTT GTGCGTCTGC	120

CCAACCTTGG CAAGGTTGTA TTCTACCGCT GAACACTTTC TGCATATGCG GGTGAAGGGA 240  
 5 GTCGAACCCC CACGCCGTAA GgntGAGATC CTAAGTCTAG TGCCTCTGCC AATTCGCGCA 300  
 CACCGCCAA TGGTGAGnCA TAGAGGnTTC GAACCTCTGA CCCTCTG 347

(2) INFORMATION FOR SEQ ID NO: 4267:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 337 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4267:

GACTTGTCTT CTTGGACCTA TATCATGTTT TTTATTTTCT AATGCAGGAT CTTTAATTGC 60  
 20 ATCTTTAAGT GATTCATCCG CTGCAGGATA GTTTTCGCA GTGTTTGCTG GTTGCCTGAG 120  
 GThTGTGTTT GATTGTATC CTTAGGTGGC TGAGTTGTAG TTGCATTATT ATTTTGATTT 180  
 25 TCCGAGATTT TATCTGAAGT ATTTGTATTT TCTGCTGCTT GTGCTTGATG TTGAGAAGTA 240  
 ATTA AAAATA GTGTACTGAC AATGACCGAT GCAACGCCTA GAGTTGATTT TCTAATAGAA 300  
 TAGGAAAGAC CnThAATTTT GGTGGATGT TTGTCA 337

30 (2) INFORMATION FOR SEQ ID NO: 4268:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 35 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4268:

40 ATACATGTTG GAATACTTGT CCATAGAnA ATATTGGCTG GTAACCAAT CACGGCTTCT 60  
 AAGTAGTTCT TTCTTCTAT TAAATAGCGA CGAATCACAC CTTCTGCGGC ACCACGGAAT 120  
 45 AATACACCAT GTGGAGTAC GACTGCCATG GTACCTTCAT CGTCTAGGTA ATGTACCATG 180  
 TGTTGAATAA AGGGCAAAGT CTGCTTTGGG ATTTTGGCGC AACTTGGCCG TTAACCACTG 240  
 GAATCGTTCA TCATTTTTC nATTTTGGAA TCTGGCTGGT TCCATTTTCG GCACCTGGAT 300  
 50 GGTGGGGGTT TCGCAATAA ACGGCATTCA AATGGTATTT GGCCTAAACA AGGCCGGGAT 360  
 TTTTCCAATG GGGGTCAATCA TTAAnGGGAT CnTCGAAGTT 400

55 (2) INFORMATION FOR SEQ ID NO: 4269:

(A) LENGTH: 345 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4269:

10 GGCTCATCGC ATCTGGGGC TGTAGTCGT CCCAAGGTT GGGCTGTTG CCCATTAAAG 60  
 CGGTACGGAG CTGGGTTTAC AACGTCGTGA GACAGTTCGG TCCTATCCG TCGTGGGCGT 120  
 AGGAAATTTG AGAGGAGCTG TCCTTAGTAC GAGAGGACCG GGATGGACAT ACCTCTGGTG 180  
 15 TACCAGTTGT CGTGCCAACG GCATAGCTGG GTAGCTATGT GTGGACGnGA TAAGTGCTGA 240  
 nAGCATCTAA GCATGAnGCC CCCTCAAGAT GAGATTCCCA ACTTCGGTTA TAAGATCCCT 300  
 CAAAGATGAT GAGGATATAG GTCGAGGTG GAGCATGGTA CATGT 345

20

(2) INFORMATION FOR SEQ ID NO: 4270:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 370 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4270:

30 AAGAATTAAT TATACATTTT ATTAACATTT AAGTCAATAA CTTTTTTTAT CTTGTCCATT 60  
 TTATTTTTTA ACCAAAATTT GATTAAAAAA CTGCCTGGCA ACCTTCTACT CTAGCGGAAn 120  
 35 TAAGTCGaCT ACCATCGACG CTAAGGAGCT TAACTTCTGT GTTCGGCATG GGAACAGGTG 180  
 TGACCTCCLT GCTATAGTCA CCAGACATAT GaATGTAATT TATACATTCA AAAGTAGATA 240  
 GTAAGTAAAA GTGGATTTTG CTCGCAAAc ATTTATTTTG ATTAAGTCTT CGATCGATTA 300  
 40 GTATTCTGCA GCTCCaCATG GTCACCAAGT TCCACCTCGA ACCTATTGgn CGCATCATCT 360  
 CGCAGGGAnC 370

45

(2) INFORMATION FOR SEQ ID NO: 4271:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 327 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4271:

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ATTAACAAAA GGCATTGATT TAGAAGGGCG GACATTTTAA CACAATTATG ATTGGCGTAA 120  
 AGATAAAGAT GGCACATTAT TAAATACCAT CATTCTGTGT CCGGCACTTG TGGCACAATG 180  
 GaTTAAATTTA CAATATTATG CGTCGACAGT TCGGCCGCAT TTTTACGGtA ATGGGAATAA 240  
 AGCGACACAA ACCGTCACGT CAGTGTGTGT GTCATGCAAG GTAATGCGAG TGCATCTGAT 300  
 GTAGGGCTTA TCATGGCCAA TCTGTTA 327

(2) INFORMATION FOR SEQ ID NO: 4272:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 325 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4272:

CATTCTTTAA ACTCTGTAAG TACTCTTCA ATCTCAGGG CATCTACTAA CATATCATCA 60  
 GTAATATGCG TCAAATTGAT AATCGTTTCC GATAATCGTT CATGCGGATT ACTAAACCTT 120  
 TCAAACCTTAT CGATGATTTT ACCGTTATGA ACTTTACAG CTGCAAnTCG ATGATTTTAT 180  
 CATACTGATT TGATAAACCA GTTGTCTCAA CGTCGAACAC AACATAAGTA GCATCTTTTA 240  
 ATACGACATC TTGTGGGTTG TATGCAATCG GGAACACCAT CATCACTAA CATACCTTCC 300  
 ATACCGGnAT ATCATTTTAA nGCCA 325

(2) INFORMATION FOR SEQ ID NO: 4273:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 357 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4273:

TCCGCCTTG ACCTGAAGAA CACTTGICTT GTCGTTAAGA TGA CTCTAGA CTCTTATGTT 60  
 TATTATCAAC CGTTAATAAA CTTACCATCA AGAGTGACAC TACCATACT GACAGTGCAG 120  
 TATAGAATGG TGTATACCT GAACATAAT CCTTAACGCG GAAAACATCA ACAGTCTTCT 180  
 TATTAATAGG ATTTGCAATA ATACCGGCTT GCTTTTCAA ATCACTCTTA AGTGTGTGCA 240  
 TtAATTTGTC GACTGCATCA TCTnTGCTA ATTTCTTGAA AATTTTGATT CGCTTTTTTC 300  
 CAAATCCTTn TCCAACATCA GGCAATTTTA TTTTGAGAAA AATCAGCCAA ATCCGGA 357

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4274:

ACGTTAGCAC	AAGCCATGAA	CCAATTAGGT	GGAAGAGTA	ATAGTGGTGA	AGGTGGCGAA	60
GATGCAAAAC	GTTATGAAGT	ACAAGTTGAT	GGAAGCAACA	AAGTAAGTGC	GATTAACACA	120
GTIGCTCTCG	GGCGTTTGG	TGTAAGTAGT	GATTATTTAC	AACATGCCAA	AGAAATTCAA	180
ATTAAAGTTG	CGCAAGGTGC	AAAGCCTGGT	GAAGTGGTGC	AATTACCTGG	TACTAAGGTA	240
TATCCGTGGA	TTGCGAnGAC	AAGAGGGTCA	ACGCCAGGTA	TCGGTCTGAT	TTCAACACCG	300
CCACATCAIG	ATATTTnATT	CCATAnGAGG	ATTTAGCCGC	CACCTGATAC	CTGGATTTTG	360
GAAAAATGGC	GAATTAAGGT	TGcGATTTT	CCCCGGGTAA			400

(2) INFORMATION FOR SEQ ID NO: 4275:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 341 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4275:

AACGTCGTTA	ATTGAATAAC	GCTTATGTTA	TAAGAGCACT	CATACCAAAC	CATAATCATC	60
TATAGATATA	ACAATTCACG	ATATAAGGGC	TGTGTTTGGC	ATAGCCTTTA	GATATACACT	120
TAATTCCTAT	TAAATAGTA	GGGATTAAAA	GGGGGCTTGT	CATGGATTAA	AATTCAACAA	180
TTACAACATC	ACTTTGGATC	ACATAAAGTA	ATTCATAACT	TTAATTTGGA	CATTAGCAAG	240
GGAGAAATAG	TCACTTTCAT	AGGGGAAAAG	TGGTTGCCGA	AAGCTACTT	TACTCAATAT	300
TATCGGTGGA	TTTnTTCCAT	CCATGnCTG	GTCGTGTCCA	n		341

(2) INFORMATION FOR SEQ ID NO: 4276:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 368 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

TAGTGATATA CGACATCACA GCATAATATT GCTTTAGAAA GTCGTGCCGA ACTGGAACTT 60  
 ACAAGTCTAG TTGGAACACA CACTGATGTG AGTGGTTTTC TTTATTITAA ACATGAACAA 120  
 5 TCAGATAAGT TACTAGCATT AGCAAATATT ATTAATACAA AGGGCTTCGA TTCATAAAAT 180  
 TTAACAACAAT GATTAAAATT AGACGTGTAA ATTGTTAAAT TCTAAACCG AAATAACCA 240  
 CATTCATTA AACCACTTT TTGTTTCATCA CTATATTCA CACnGCTTCA TTAATAAACG 300  
 10 GAATGCTTCA nCCGCTTCAA CTTCAACTGG CTTCAACTTC nGCCTACTTC ATCATACCA 360  
 ACGGTCCG 368

15 (2) INFORMATION FOR SEQ ID NO: 4277:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 318 base pairs  
 (B) TYPE: nucleic acid  
 20 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4277:

25 ATGGAAGTAC GTGACGTCA CTACTCTCAC TATGGCCGTA TGTGTCCAAT TGAACACCT 60  
 GAGGGACCAA ACATTGGATT GATTAACCTA TTATCAAGTT ATGCACGTGT AAATGAATTC 120  
 30 GGCCTTATTG AAACACCATA TCGTAAAGTT GATTAGATA CACATGCTAT CACTGATCAA 180  
 ATTGACTATT TAACAGCTGA CGAAGAAGAT AGCTATGTTG TAGCACAAAGC AAACCTTAA 240  
 TTAGATGAnA ATGGTCGTTT CATGGGATGA TGAAGTGTGA TGTGCTTTCG GTGGTAACAA 300  
 35 TACAGTnATG GCTAAAGn 318

(2) INFORMATION FOR SEQ ID NO: 4278:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 40 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4278:

CACTTGTA CTCTGATGTT GAGCCAGACT CTGATGTACT TACCGATGTA GATAAACTTG 60  
 CAATGGTCGA CATCGCGTTT GAAGTTGATG TACTTAGCGA ATCACTTAAT GATGCTGATG 120  
 50 TGCTTTGTGA ATCGGATTCT CTCGTGCTTG TACTTGTTGA GTTTGAGGCA CTTTGGCTTG 180  
 CTGAGTTTGA GTCTACTCCG CTTTGATTCA TTGAGGCACCT TAGTGACAAT GATGTACTCG 240

55



TACTTATGCT CATTGGATGT TGAATCGGAT TTACTTTTAC TTGAATGATG TTGAGTCGGA 360  
 TTCACCTTCA CTTGTAGAAC CACTTAATGA TGTGGGATGT 400

5 (2) INFORMATION FOR SEQ ID NO: 4279:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 324 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4279:

TTTGTAATTC GATTAAAAAG ATATTAGACA TAAAACTAA AAhCAGCAGT AAGATGATTT 60  
 ATGATTAAAA ACTATCTTAC TGCTGTTTAC TTTTATAAT ACTTCTGAAT GTCTTCACTT 120  
 ATACTCTTAG TCACAGATTT AAATAATCAA AAGTGCACAT TATTAATAA TCAATTTCAC 180  
 ACTCAATGCG GCTCATCGCA TTCATTTCTT GTCTAGCAAC GTTCTACTCT AGCGGAAGTA 240  
 AGTTAGCTAC CATCTCTGCT AAGAACCTTT CTTGACITGT GACAATCGCT TGCTTCTTTC 300  
 CTCTCCTTCG GCTCTCGCTT ACTC 324

(2) INFORMATION FOR SEQ ID NO: 4280:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 326 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4280:

CTCACTAGTC GAGTGACACT GCGCCGAAAA TGTACCGGGG CTAACATAT TACCGAAGCT 60  
 GTGGATTGTC CTTTGGCATG TgnTTAGGAG AGCGTTCTAA GGGCGTTGAA GCATGATCGT 120  
 AAGGACATGT GGAGCGCTTA GAAGTGAGAA TGCCGGTGTG AGTAGCGAAA GACGGGTGAG 180  
 AATCCCGTCC ACCGATTGAC TAAGGTTTCC TgnGGAAGGC TCGTCCGCTC TGGGTTAGTC 240  
 GnGTCCTAAG CTGAGGCCGA CAGTAGGGCG ATGGGATAAC AGGTTGATAT TCCTGTACCA 300  
 CCTATAATCG TTTAATCGAT GGGGGG 326

50 (2) INFORMATION FOR SEQ ID NO: 4281:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 370 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4281:

5 TCGAACATGA GCGATTATTT CTTATGAATT CAAGCTTATT TAAAACTCTT TATTCACCTG 60  
 GTTTGCGCTG GTAAAACTTA TATTTTACTT ACTTATCTAG TTTTCAATGT ACAATAATG 120  
 10 GTGGGCCTAA GTGGACTCGA ACCACCGACC TCACGCTTAT CAGGCGTSCG CTCTAACCAAG 180  
 CTGAGCTATA GGCCCATTTT TTTGAATGTT AAATAAACAT TCAAAACTGG AATACAATAT 240  
 GTCACGTTAT TCCGCATCTT CTGAAGAAGA TGTTCGGAAT ATATCCTTAG AAAGGnAGGT 300  
 15 GATCCAGCCG CACCTTCGA TACGGGCTGA CCTTGTGAC GACTTGCACC CCAAGCATTT 360  
 GTGCCCA<sub>n</sub>Ch 370

(2) INFORMATION FOR SEQ ID NO: 4282:

20 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4282:

30 GAGAGATGAC ACGGnACTGA ATTGTTTGA CACCACGTGA TGAATGTGAT CGTCGSCCTT 60  
 CTTACGATT G<sub>n</sub>AATACTTT TACATCAAGA ACGATACCGC CAGCGCCGTG AGGTACACGT 120  
 AATGAAGTAT CTCTAACTTC ACGTGCTTTT TCACCAAGA TTGCATGTAA CAATCTTTCT 180  
 35 TCGGCAGTTA ACTCAGTTAC ACCTTTAGGC GTTACTTTAC CAACTAAAAT ATCTCCATCT 240  
 TTTACTTCTG CACCAATATA AACGATACCA CGATCGTCTA AGTTCTTAAG TGCACTTTCA 300  
 GAAACATTAG G<sub>n</sub>ATATCTCT TGTGATTTC TCAGGGCCTA ACTTAGTATC ACGTGCTCTT 360  
 40 GAATCCATAC TCCTTCAATA TGAATAGAAG TATACACGG<sub>n</sub> 400

(2) INFORMATION FOR SEQ ID NO: 4283:

45 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 324 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

50

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4283:

55 AATTCTACAG GCAATGCGAG TTGGGGTGTG GGCCCCAACA AAGAGAAATT GGATTCCCAA 60

TCTGTCCAC TCCGATTAT CTCGTGCAA TATTTTTTC AAAGCGATT AAATCATTAT 180  
 CATGTCCAAT CATGATTAAA ATATCACCTA TTTCTAAATT AATATTTGGA TTGGTGAAA 240  
 5 TGATGGACTC TTGGCTCGT TTAATTGCCA TAATGTTAAT nCCATATTGT GCTCTTATAT 300  
 CThAATCCAT GATAGACTGn CCCG 324

(2) INFORMATION FOR SEQ ID NO: 4284:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4284:

20 AAATCGTAAC GAGTGAAC TTCTATTAG GTGGCGAAGT AACTTACTAG CACCTGACGA 60  
 AACGGTTTTA GATCGTATTC AATGAAAAAG GCCGGTATTG AATGAATCAC ACTTAGCAGC 120  
 GATTGATCAG GAACATTTTA AATTAACTTA TTTATCAACG GTATATGAAG GGGATTTGGC 180  
 25 AAGATGCGTT ATAAGCATTA GGCCGTAGAA GCAGTGAAAT GCTGThAAAC AAGGGCGCTC 240  
 AAATCTAGT GTTAGATGAT AGTGGATTAG TTGGATAGCA ATGGCTTTGC AATGCCGATG 300  
 TTTACTCGCA ATGAAGTGCA TGTGCCATGC AATTGACTTC TTTAAAGCCA GATTTACGTG 360  
 30 ATGTCTAACA AGTTTTnTnc GCTAAAAATcn GGGTGGAGAC 400

(2) INFORMATION FOR SEQ ID NO: 4285:

35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 560 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4285:

45 CATTTTTCTT TGtGTTTACT TTTTATTTTG ACGTTTTAGA CATAAAAAAA GAGACTCACG 60  
 GTCTCAACTT GCCTGGCAAC GTTCTACTCT AGCGGAACGT AAGTTGGCTA CCATCGTCGC 120  
 TAAAGACCTT TCtTGACTTG TGACAATCGC TTGCATCTTT CTCTAnCATC GgnTnTAGCT 180  
 50 TACTCATTTA GCTCTACTAA ACTCGTTGCG CTCTTTTCTC GTTTCGTCAG ATTCAAACGT 240  
 TTTCACTTCG CCAAGCCATT TTTCTTTGTG TTTACTTTTT ATTTTGACGT TTTAGGCATA 300  
 AAAAAAGAG ACCTTgncGG TCTCAATGCG GGCTCATCGC ATCCATTTTT TGCCTGCGAA 360

55

TGACAATGCG TTGCTTCITT CCTCTCCTTC GGCTCTCGCT TACTCATTTA GCTCTACTAA 480  
 ACTCGTTGCG CTCTTTTCTC GTTTCGTGAG ATTCAAACGT TTTCACCTCG CCAAGCCATT 540  
 5 TTCTTTTGTG TTTACTTTTT 560

(2) INFORMATION FOR SEQ ID NO: 4286:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 337 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4286:

GTAACACTCG GATAACCTA CCTATAAGAC TGGGATAACT TCGGGAAACC GTAGCTAATA 60  
 20 CCGGATAATA TTTTGAACCG CATGTTTAA AGTGGAAGA CGGTCTTGCT GTCACCTATA 120  
 GATGGATCCG CGTCGATTA GCTAGTTGGT AAGGTAACGG CTTACCAAGG CAACGATGCA 180  
 TAGCCGACCT GAGAGGGTGA TCGGCCACAC TGGAACTGAG ACACGGTCCA GACTCCTACG 240  
 25 GGAGGCAGCA GTAGGGAATC TTCGCAATG GCGGAACTG GACGAGCAA GCGCGGTGA 300  
 TGNATGGAAG GTCTTCGGAT CGTAAAACTC TGTTATT 337

(2) INFORMATION FOR SEQ ID NO: 4287:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 351 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4287:

CAATCGTGCT CAnTGCGCAT CGTnACTCAT CTGTATGTGT TCCAGCATAT ACAATTTTGC 60  
 CATCTTTAAT GACAACTGTA CCATTTTICA CAACATTTAA TTCATCTAAT TCCTTACCCT 120  
 45 TCAAAGGTTT ATCTGTTGAT CTCGGTAAAA TTAATTTCTG CTATATGATT AATTATTAAA 180  
 TCATCATTAC TTATCACCTG CTTTATCAAT CATGGAATAT GAATACCTTT TTCTTTAGCT 240  
 GTTTGAATAG CGATGTCATA GCCAGCATCA ACATGTCGGG CAACACCCAT ACCTGGGTCA 300  
 50 GTGTCATAA CACGTTCCAA TCTTCTTICA GCACGCTCTG AATCCATCTG G 351

(2) INFORMATION FOR SEQ ID NO: 4288:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 316 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4288:

CTATTCACCTG CGGCTCTTCT GGGCGTTAAC CCTAAAGAGC ACCCCTTCTC CCGAAGTTAC 60  
GGGGTCATTT TGCCGAGTTC CTTAACGAGA GTTCGCTCGC TCACCTTAGA ATTCTCATCT 120  
TGACTACCTG TGTCGGTTTG CGGTACGGGC ACCTATTTTC TATCTAGAGG CTTTTCCTGG 180  
CAGTGTGAAA TCAACGACTC GAAGACACAA TGTCTTCTCC CCATCACAGC TCAGCCTTAA 240  
CGAGTACCGG ATTTGCCTAA TACTCAGCCT TACTGCTTAG GACGTGCAAT CCAATCGCAC 300  
GGTTThGCCT ATCCTA 316

20

(2) INFORMATION FOR SEQ ID NO: 4289:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 322 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4289:

TThTTTATGT CTAAAACGTC AAAATAAAAG CAAACACAAA GAAAGATGGC TTGGCGAAGT 60  
GAAAACGnTT GAATCTGAGC AAACGAGAAA TGTAAGTAT AATAAAAAGC AGTCATAAGA 120  
TGATTCAAT TAGAAATCAA TTTATGACTG TTTTCTTAC TATGTGTAA ATTAACAATG 180  
AATATAACAT CTTATTTTCA TTAATATAAA TATTGGAAGG ATCGAnATGA TTTACAGTT 240  
GTTTGAGTTG TATTAAATCA TCATGATCTT TAAGTTGAAT ACCAATAATG ACAGTACCTG 300  
TATTTTGAGA GATTTTTTAA GT 322

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(2) INFORMATION FOR SEQ ID NO: 4290:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 338 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4290:

TCATTTAGCT CTACTAAACT CGTTCGCTC TTTTCTCGTT TCGTCAGATT CAAACGTTTT 60  
CACTTCGCCA AGCCATTTTT CTTTGTGTTT ACTTTTTATT TTGACGTTTT AGGCATAAAA 120

55

CTCTAGCGGA AhtAATTGGC TACCATCGTC GCTAAAGACC TTTCTTGACT TGTGACAATC 240  
 GCTTGCTTCT TTCCTCTCCT TCGGCTCTCG CTTACTCATT TAGCTCnACT AAACCTCGTTG 300  
 5 CGCTCTTnTC TCGTTTCGTC AGATTTCAAA CGTTTTCA 338

(2) INFORMATION FOR SEQ ID NO: 4291:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4291:

AATTGGTTTA CACCAGGTGA TAATGTATCG TCGCCTTCTT CACGATTGAA TACTTTTACA 60  
 20 TCAAGAACGA TACCGCCAGC GCCGTGAGGT ACACGTAATG AAGTATCTCT AACTTCACGT 120  
 GCTTTTTTCAC CAAAGATTGC ATGTAACAAT CTTTCTTCGG CAGTTAACTC AGTTACACCT 180  
 25 TTAAGGCGTTT ACTTTACCAA CTAAATATC TCCATCTTTT ACTTCTGCAC CAATATAAAC 240  
 GATACCACGA TCGTCTAAAG TTCTTGAAGT GCACTTTnCA GAAACATTGA GGAATGATC 300  
 TCTTGTGATT TCTTCCAGGT CCTAACTTGA GTGATCACGT GGTCTCTGGA TTGCAGACGC 360  
 30 TTGCAAGATG GAATGAGAAG TGAhACACGT GCATCCTTGC 400

(2) INFORMATION FOR SEQ ID NO: 4292:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 326 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4292:

AAACGTTTTT ACTTCGCCAA GCCATTTTTT TTTGTGTTTA CTTTTTATTT TGACGTTTTA 60  
 45 GGCATAAAAA AAAGAGACCT TCGGCTCTCA AATGCGGCTC ATCGCATCCA TTTTITGCTT 120  
 GGCAACGTTT TACTCTAGCG GAACGTAATT GGGCTACCAT CGTCGCTAAA GACCTTTCTT 180  
 GACTTGTGAC AATCGCTTGC TTCTTTCCTC TCCTTCGGCT CTCGCTTACT CATTTAGCTC 240  
 50 TACTAAACTC GTTGGCTCTT TTTCTCGTTT CGTCAGATTC AAACGTTTTT ACTTCGCCAA 300  
 GCCATTTTTT TTTGTGTTnA CTTTnT 326

(2) INFORMATION FOR SEQ ID NO: 4293:

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(A) LENGTH: 356 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4293:

10	GGGGACAATT CCCTGGGGT TCAAGTCCTC TCGGGCCGGC ATCAAAATTC TTAATTTAAA	60
	TAAGCGGGTG TAGTTTAATG GCAAAACCTC AGCCTTCCAA GCTGATGTTG TGGGTCGAT	120
	TCCCATCACC CGCTCCATAG ATAATTTTAA TGAACATTGA AAAGTGAATG ACAATATGTC	180
15	AACGTTAATT CCAAAAACGT AACTATAAGT TACAACATT ATTTAGTATT TATGAGCnAA	240
	TCAAACATCA TAAATTTTAT GGAGAGTTTG ATCCTGGCTC AGGATGAACG CTGGCGGCGT	300
	GCCTAATACA TGCCAGTCGA GCGAACGGAC GAGAAGCCTG CCTCnChGAT GTTAGC	356

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(2) INFORMATION FOR SEQ ID NO: 4294:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 314 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4294:

30	TTATCACCCA TGTTCTGACT CCCAAGTTAA ATTAATTGGC ATTCGGAGTT TGTCTGAATT	60
	CGGTAACCCG AGAGGnCCCC TCGTCCAAAC AGTGCTCTAC CTCCAATAAT CATCACTTGA	120
35	GGCAGCCCTA AAGCTATTTC GGAGAGAACC AGCTATTTC AGGTTGATT GGAATTTCTC	180
	CGCTACCCTC AGTTCATCCG CTCACTTTTC AACGTAATCG GTTCGGTCTC CCATTCAGTG	240
	TTACCTGAAC TTCAACCTGA CCAAGGTAGA TCACCTGGTT TCGGGTCTAC GACAAATACT	300
40	AAACGCCCTA TTCA	314

(2) INFORMATION FOR SEQ ID NO: 4295:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 345 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4295:

50	AAGTGAAAGA ACTCGGCGTG ACACCTATTG CACGATTCGT TGGTTTTAAG GCAGTAGGCG	60
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GCAATCTATC TGTTGAAGAC ATGATTTGA TCGAATTGAA CGAAGCATT T GCTTCTCAA 180  
 CGATTGCATC TATTAAAGAA GTAGGTCTAG ATATATCACG TACGAATGTG AATGGTGGCG 240  
 CTATTGCTTT AGGTATCCA TTAGGTGCTA CAGGCGCAA TGTTAACCG CGCGTTTACC 300  
 TAATGAAATG GGTAAACCG nCCCGATAGn CGGTanCGCA AGGGT 345

(2) INFORMATION FOR SEQ ID NO: 4296:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 361 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4296:

TAAATTGATT TCTAATTGAA ATCATCTTAT GACTGCTTTT TATTATACTT TACATTTCTC 60  
 GTTTGGTCAG ATTCAAACGT TTCACTTCG CCAAGCCATC TTTCTTTGTG TTGCTTTTA 120  
 TTTTGACGTT TTAGACATAA AAAAGAGAC CTGCGGTCT CAATGCGCT CATCGCATCC 180  
 ACTTTTGGCC TGGCAACGTT CTACTCTAGC GGAANTAAAT CGNACTACCA TCGACGCTAA 240  
 GGAGCTTAAC TTCTGTGTC GGCATGGAA CAGGTGTGAC CTCCTGGCT ATAGTCACCA 300  
 GACATATGAA TGTAATTGA TACATTGCAA AACTAGGATA GTGAAGTAAA AGTGATTTTG 360  
 C 361

(2) INFORMATION FOR SEQ ID NO: 4297:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 337 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4297:

AATCGTTGC GCTCTTTTCT CGTTTCGTCA GATTCAAAT GTTTTCACTT CGCCAAGCCA 60  
 TTTTCTTTTG TGTTTACTTT TTATTTTGAC GTTTTAGACA TAAAAAAGA GACCTCACGG 120  
 TCTCAACTTG CCGGCAACG TTCTACTCTA CGGGAACGTA AGTTGGCTAC CATCGTCGCT 180  
 AAAGACCTTT CTTGACTTGT GACAATCGCT TGCTTCTTTC CTCTCCTTGG GCTCTCGCTT 240  
 ACTCAATTAG CTCTACTTAA CTCGTTGCGC TCTTTTCTCG TTTCGTGAGA TTCAAACGTT 300  
 TTCCTTTCGC CAAGCCATTT TnCTTTGTGT nTACTnT 337



- (1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 323 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4298:

GTATTCCTCC ATTATTATAG GTAAATCGCT ATTAATTATA AAATTAATG GCGTCTCGA	60
CGGGAATCCT GCGTGACAGn CAGGCGTGTT ACCGCTACAC TACGAGACCA TTAGTAAAC	120
GGAGGAAGAG GGATTGGAAC CCCC CGGAGC CGTTAAGCCC CTGTCGGTTT TCAAGACCGA	180
TCCCTTCAGC CGGACTTGGG TATTCCTnCA AAATTATATG GACCTnGCAG GACTCGAACC	240
TGCGACCGAA CGTTATGAGC CTTAGCTCTA ACCAACTGAG CTAAGGTCC TAAATATAAT	300
TTTACAAC TATAAATAG TGG	323

(2) INFORMATION FOR SEQ ID NO: 4299:

- (1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 323 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4299:

CTACATGCGT TGAATTAGG ATCGGTACTT TATATGAAGA CGTGCTGCTT CCATTAAATG	60
AGTGATGCGA TTTTGGCATG AAGGTACCT TAAATGTACA TTGTTGTAAT AAAATTGCCT	120
ATAAATTTTT AGCACATAAA ATAAGAGGn CCAACCATG TTAGACTATA ACAACGGTTG	180
GCTCTTTAAT TGTA AAAAGA AAACCATACG CTATGnTGTT ACAAnGAAAA AGGTTCTACC	240
ATTGTCACAA AAAATGCATC TCTACGTGCT AGAATAAATA TTGGTCAGCC AACCAAAATA	300
ATCAACACGA GGAGTGCTA TTT	323

(2) INFORMATION FOR SEQ ID NO: 4300:

- (1) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 385 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4300:

TGAATCCAGA TAAAAATTGGA ATGATTAACG CGAATCACTT TTACTACCAA TGTCCAAAG 120  
 CTGCTCTGCA AAGCATTGT ACTCTGAGCT TTTTGGATTA AATGAATTGT CTCCAAATAA 180  
 5 AAATACAATT GCCATTAAAA TACCACCAGA TATTACAAGT GGCAACATGT TAGAAACACC 240  
 GTTnCATIGA AGTGTTTGAT AGAATGCTTT ACCTGGGGCT TGAATTTTTC TTGGACTGTG 300  
 CATTGAGTT ACCTTTTCTT TGGACCATCA CGGGGCAACA AAAGGTTTGA CGACTTGTGA 360  
 10 GCTGAATGGC TThGnTGAAT GAATT 385

(2) INFORMATION FOR SEQ ID NO: 4301:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 348 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4301:

TCCTGTACCA CCTATAATCG TTTTAATCGA TGGGGGACG CATAGGAATA GGCGACGTGA 60  
 25 CGATTGGATT GCACGTCTAA GCAGTAAGGC TGAGTATTAG GCAATCCGG TACTCGTTAA 120  
 GGCTGAGCTG TGATGGGGAG AAGACATTGT GTCTTCGAGT CGTTGATTTC AACTGCGGA 180  
 GAAAAGCCTC TAGATAGAAA ATAGGTGCCC GTACCGCAAA CCGACACAGG TAGTCAAGAT 240  
 30 GAGAATTCTA AAGTGAACGA ACGAACTCTC GTTAAGGGAC TCGGCAAAAT GAnCCCGTAA 300  
 CTTTCGGGAA AAGGThnCTC TTTAnGTTA ACGCCCCAAA AAACCGCT 348

35

(2) INFORMATION FOR SEQ ID NO: 4302:

35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 385 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4302:

45 AATGGAACGT GCTTCTGTAT TGGCCCAAGT AGATATTCAT CGTGACGAA CACATAATAA 60  
 AGGTGTTATG AATGGCATAC ATGCTGTTGT TTAGCAACA GGGAAATGAT ACGCGTGGTG 120  
 CAGAAGCAAG TGCGCATGCA ThnACGCGAGT CGTGACGGGA CAGTATCGTG GTATTGCTAC 180  
 50 ATGGCGTTAC GATCAAGATC GTTCAACGAT TGATTGTGAT AATTGCAAGT GCCTATGGAC 240  
 ATTGGGCAAT CGTTGGCGGT GGTACAAAAG TATTACCAAT TGCTAAAGCT TCCATTAGGn 300

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TTTTGAGCGG CAAAACTTT GnCAG

385

(2) INFORMATION FOR SEQ ID NO: 4303:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 374 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4303:

AGTGCGACGA TTGTATTTT ACAAGAATTT TATCAACAAG ATTTAATTAG CTTAAACGCA	60
GCAATCCCTG TGTTACTAGG CGATAACATT GGTACCAAGA TTACAGCTAT CTTAGCTAGT	120
TTAGCCGGCT CAATCGCTGC AAAACGTGCG GCGCTTGATC ACGTCATCTT TAACTTAATC	180
GGGGTAATTA TCTTCACAA TTTCTTGCCA GTTGTGATTC ATTTGATTAG TTTGTTACAA	240
GATTTATGGG CACTTAAAA CAGCGATGAC GATTGCAGTA TCACATGGGA TCCTTCAACA	300
TAACCAATAC CTTGGATTCC ATTTACCAAT TTGTAGCCng GTTTAGCATn GGATTGGTTA	360
CCAAGCCTTG TCCC	374

(2) INFORMATION FOR SEQ ID NO: 4304:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 314 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4304:

AAAACAGGAT ACTTCGATAA GTTAATGATT TCTGTGTGA ATCGCGCACC ACGTTTCTTA	60
ATTTTACCGA CTATTATATT AATTGGTATT TTAGGTAGTA CAGCCGGCGA TGCTGCGACA	120
ATTTCTTGCC GCCGCTTGCA GCAATGCTTT TTATTAAAA TGGCTATCAC CCTATCGCTG	180
GACTAACGAT GGCATATGCT TCCGCTGTTG GAGGATTTCG AGCAAAATATA GTTGTGGTA	240
TGCAAGATGC TTTGGTCTAT TCATTTACAG AACC GGCAAC ACGTATCGTT TCAGATTCTA	300
TTAAACAAA CGTT	314

(2) INFORMATION FOR SEQ ID NO: 4305:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 344 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4305:

5	CGTTGCAGAA TGTGTTGAAA TCATCAGAAA TATGCTTAGG CAAGCTAATA TCATTGTCAG	60
	CCATTAAATT ACGGTTACCA ACCAATATAT GGTGATGATC AATCGTTGCT TCAATACCAT	120
	GGCCAGGTAC TGCTTTAAAT GTTGTGTGCT CAGTTAATAT TAATTGCTTT TCTTTTGCAAT	180
10	AATTGACAAAT GGCTTCTGCC AATGGGTGTT CAGAATCTTT TTCAGCAGTA GCAAGTAGTT	240
	GTAGCGTTTG ATTGTCACCA TGATAATCTG TCACGACTGG GACGACCATT TGTAATGGnA	300
15	nCCGTCCTTA TCTAAAACGA TGGGTATCAA TTTGATGnGG GCGG	344

(2) INFORMATION FOR SEQ ID NO: 4306:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 378 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4306:

25	AGTTTCCTGT AAAATTAAAT AAGGACTTAA CATTGCGAGT CAAGGTATTG ATCAAGCTAA	60
	TGGACAGTTA AATGATGCCA AAGCTTCGTC ACACAAGTTA GAAGTAGAGT CGGTGATTAT	120
30	CAAGATGCAA TTGACGCGC GCAAGATTTA AATCGAAGAA ACCAGCAACA GATTCTCTCAA	180
	AATAGCGCGG CGAACAACGA AACATCAAAT AGTGACCTG CAGCTGGTAA TGGTGTAGCA	240
35	TCAACGCCAC CAAGTGCACC AAGTGGCGAT ACTGCACCAA ATAATAATGT TACGCAAAAT	300
	ACCGCACCAG ATGAGTGAAT AATGCGCCTG TATCGACTAC ACCACAAATG ACAnnCCGGG	360
	GAAnAGATGG TCAAAATTT	378

(2) INFORMATION FOR SEQ ID NO: 4307:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 318 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4307:

50	GGACTTGGGT ATTCCTCCAA AATTATATGG ACCTTGCAAG ACTCGAACCT GCGACCGAAC	60
	GTTTATGAGC CGTTAGCTCT AACCAACTGA GCTAAAGTTC CTAnATATAA TTTTACAACT	120

CTAGCCAGCT GAGCTACACC GCCTTATATA GTTTGTAAAT AATATGGTGG AGACTAGCGG 240  
 GATCGAACCG CTGGACCTCC TGCCTGGCAA AGCAGnCGCT CTCCCAGCTG nGCTAAGCCCC 300  
 5 CCATAATAAT TACAGTAT 318

(2) INFORMATION FOR SEQ ID NO: 4308:

(i) SEQUENCE CHARACTERISTICS:  
 10 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4308:

TGTACGTTTA ATACCTATGA TATATGCTGC AAGTCTCATA TCTATTTTTC GGTTTTGAGA 60  
 20 CAATTCGTAA ATCGTATCAA ATGCCGCTTC TAATTTTTCa CGTAGCTTTT CATTAACCTC 120  
 TTCTTCAGAC CAATAATAAC CTGATTATT TTGTACCCAT TCGAAGTAAG AAACCGTTAC 180  
 ACCACCAAGCA CTGCTAATA CGTCTGGAAC TAATAATATA CCACGTTACG TTAATAATACG 240  
 25 TGTGCTTCT GGTGTTGTAG GTCCATTAGC AGCTTCAACA ACGTACTAG CTTTAATATC 300  
 ATGTGCATTG TCCTCnGTAA TTGGTTGAA TAGCnGGGA CTAAATGCAC ATCnAATCAA 360  
 30 CAATCCTATT GGATGTCCCA AnAATTGTAC GACCAACACC 400

(2) INFORMATION FOR SEQ ID NO: 4309:

(i) SEQUENCE CHARACTERISTICS:  
 35 (A) LENGTH: 326 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4309:

CAAAATAACC AGAGCTAGTT GCAATTGCTG AACCACATCC TAATAGACCG AAAAAAGAGAA 60  
 45 GTAGACGTGC GGCACCGGCA GATCCTAATG CACTCCAGC AGATCCAGCG GCTGCAGCGG 120  
 GTAGGAAACG GTGGTGACC AGTTGCAATT ACAGCGCCAT ATACGCCAAC AACTGATCCT 180  
 AATGCCAATA ATGCAGGACA AAATGCACCT AACGAATnGT TGTTCATTTG ATGACAATGG 240  
 50 TATTAGACCA AGTACCAACC GTTCTGTGCC AChThAAACG TTGTTAATAA CTGCGCGGGC 300  
 TTCACACTAA TCAATGGTGG CAAAGT 326

(2) INFORMATION FOR SEQ ID NO: 4310:

55

(A) LENGTH: 313 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4310:

10	TCAAAGCGCC AATAACATCT TCTACTGAAG TTTCTTTAGA TTTAGCATTC AGTGATAATG	60
	TTATTGTTGC TTTTCTTCC ATTGGAATAC TTTGATGAAT CGTTAATACA GATAGTTCTA	120
	ACTTTGATAT AACACTAGT ACACGTGCCA ACATACCAAC AATATCAGTT ACATATAAAA	180
15	TTAATGTAAA TTCTCGATGG TCAAGCATTT TATCGGCTAC TGGAAATATC GTTCTCTAT	240
	ATnTATAAnA AGCACTTCTA GATAGATCAA ACTGTTTAAc GGCATCATAA ATGnCAATG	300
	TGGATCACT TTT	313

20

(2) INFORMATION FOR SEQ ID NO: 4311:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4311:

30	GGTTCGAATC CAGCTAGCCC AGCCATTAGA GCCATTAGCT CAGTTGGTAG AGCATCTGAC	60
	TTTTAATCAG AGGTCAGAG GTTCGAATCC TCTATGGCTC ACTACTTGCA CTTTCCATT	120
35	TTGGGAAGTG CTTTTTTTA GGTTCCTCCAC CAAATGTGGT GGGTATATAA TTTAAAGAAC	180
	TATTTTTAAA ATACAACCTT TAGAGCTTTT ATTATTAGGC GGCCAGTCCA TTATTGGGGC	240
	TGGTGTCTT CnTTTTTTCT CCITTGTACA AGCTGAAAAT CATCATTATA CGTGCTTAAA	300
40	GTGGTGAATT CTGAACCAA GAATCACTTG ATAATTTATC TATATAATCC TcNATAGACC	360
	ATATAATGCT GGAATAATGG ATCTACAnCC TGAGTTCCAn	400

45

(2) INFORMATION FOR SEQ ID NO: 4312:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 318 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4312:

55

ACTTACAGCT CCCCAAAGCA TATCGTCGTT AGTAACGTCC TTCATCGGCT TCTAGTGCCA 120  
 AGGCATCCAC CGTGGCCCT TAATAACTTA ATCTATGTTT CCACCATTTT TATAAGTCAA 180  
 5 ACGCTCACAT ACGGCTTCGT TTTTATTATT TTAATGCTC ATTTACATAA GTAAACTCTG 240  
 CTTTAAATA ATTAACATCAT TGTCTGCAAA ACGTTTTCnT TTATAAAAAG ATTAACGCG 300  
 TTATTAAACT GTGGAGTG 318

(2) INFORMATION FOR SEQ ID NO: 4313:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 316 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4313:

ACGGTGATCA CTCACGCGAG ATTTTAAGTC CTGTGCGTCT GCCAGTTCGG CCACCCCGGC 60  
 ACTATAAAAA TGGAGCAGAA GACGGGATTG GAACCCCGGA CCCCAACCTT GGCAAGGTTG 120  
 25 TATTCTACCG CTGAACACT TCTGCATATG CGGGTGAAnG GAGTCGAACC CCCACGCGCT 180  
 AAGGCATAGA TCCTAAGTCT AGTGCGTCTG CCAATTCCGC CACACCCGCA AATGGTGAGC 240  
 CATAGAGGAT TCGAACCTCT GACCCTCTGA TTAAGAAGTCA GATGCTCTAC CAACTGAGCn 300  
 30 AATGnTCTT CCATGG 316

(2) INFORMATION FOR SEQ ID NO: 4314:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 356 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4314:

AGGAAAAGTC GTTGTGATAC ATCAACACAGC TGAAGAAGTA CCACCAAGTG GTGCTAAAAC 60  
 45 AATGATTGAA AATGGTGTAT TAGACGGTGT TGATCATGTA TTAGGTGTAC ACGTCATGAG 120  
 CACAATGAAA ACAGGTAATA GTGTATTACC AGACCTGGTT ATGTTCAAAC AGGACGCGCA 180  
 50 TnCTTCAAAAT TGAAGTCAA GGTAAGTGG TCATGGTTCA TCACCACATA TGGCCAATGA 240  
 TGCCATTGTT GCAGGTAGCT ACTTCGTAC AGCGTTACAA ACAGTGTATC TAGACGACTA 300  
 GGCCATTGA ACCGGTGGTT TCACATCGGT CATTTnCCGT AAAAGnCCAT TCCATG 356

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 380 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4315:

TATCAGCATT	TGTAAC	TGTT	ATTGTT	TATA	ACTTCT	TGTT	GAAGCG	CAAT	ATTACA	ATT	60
AAATGCCGAA	AGAAGT	ACCG	CGAATAT	TTT	CACAAG	TATT	TAAGGACT	TTA	ATCCAT	TTTT	120
CAGCGGTAAT	CATCATT	TCTT	TATGCATT	AG	ATTAGT	CAAT	CGCAAC	AGCT	TTAAAT	CAAA	180
TGTAGCGGAA	GGnATTTT	TAA	AATTATT	TCGA	ACCATT	TATT	ACAGCAG	CAG	ATGGGAT	TGGA	240
TTGGTGT	GCAC	AATTAT	CCCTT	GGnGGC	CTTT	GCATATT	CnG	GGTTGT	AGGG	AATCAG	300
GTCAATGTAG	AGCCAGCAAT	TGCAGCCATT	ACATAT	TGCGA	TATCGGAGCG	GACTTCAAGT					360
TGCCTCAGCG	GAGGACACGC										380

(2) INFORMATION FOR SEQ ID NO: 4316:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4316:

GCTCTAGGAT	GACTGATT	GAA	ATGTC	CATGA	ATGAACA	ACC	CCTTTG	TTTA	ATATCG	AGATT	60
TGGCAAA	TTTT	ACGTTT	TATCA	GCGTTT	CTAT	GATCAGT	ACT	TCTACG	GGTA	GCGTTT	120
GTAATTT	TACA	TCATCT	TAAC	ATATAA	ATAC	TTGCTATT	TT	AATTGAAA	AC	ATATCCT	180
ATTCTTT	TGTC	CGTTCT	GACG	TTTAAT	TATCT	AGCCTTAG	GC	ATTTCACT	TG	TTAATGA	240
TAAC	TTTCTT	CCA	CTAACC	TCCTTAA	ACC	CAATCCG	CA	ACAGTT	TTTT	ACTTTT	300
TGTTGT	CTCGT	ACATCT	CATT	AAGAAAG	TTT	ATTCTG	CTTA	AAACTT	TATA	TCCAC	360
GAGCAA	ACGn	TnCTTAT	GAC	AGAGTATT	TAA	AATAAG	CCGn				400

(2) INFORMATION FOR SEQ ID NO: 4317:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear



(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4317:

CCTTATTGAT AATGGTATGA GAATATTGTG TCGAGATGGA TGAAGGTAAT GAGTGAGAAA 60  
 5 CTGGATTTTT AAAAGTATGAG ACAATATTTT AAAAAGTCA ATTATTAACT TATAAGCAAA 120  
 TAATTGCTAT AAAAAAGTTT GGACGTGTAC AATTGCAATA TGAAGATTTT AAATTAATTG 180  
 10 TAAAGTATCG TGGAGTGGGT AACGTGTGAG AACATGTATA TAATCTTGTG AAAAAGCATC 240  
 ATTCTGTTAG AAAATTTAAG AATAAACCTT TAAGTGAAGA CGTTGTTAGG AAATTGGTAG 300  
 GAGCTGGGCA AAGCCGTTG ACGTCAAGTT TCCTGCCAGC ATACTCCATT ATTGGTTCGG 360  
 15 CGGTGGGAGG TTAAGGAAT TTACGGGAG GTTCTGGGCA 400

(2) INFORMATION FOR SEQ ID NO: 4318:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 319 base pairs  
 20 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4318:

TAACTACGTC TCCTGTTTCT GGATTCCTAA TTCCTGGTTT ACCTGGAACT TCCTCTTCTT 60  
 30 CTCTGTTGG TAACCTCGGA TCAAATTCGT CTCGATGACC TGGTGTTATC GTTCTTGGTC 120  
 CGTATTCTGT TAATTCATTA ATCGGATCTn TTGTGATTTC TTCTTTCGAT TCACCTGTAC 180  
 TAATAATTC TCCAGTTAAT GGATTTTTTA GTGTTGGCGT CGTTATTGTC TTCTCACCTn 240  
 35 TTGTGCTTC TCCTGTAAC TTTTCTGTCC CGGTGCTAAA TnCGGATTAA ATTACGGTCT 300  
 TTCTGAAGG AATCTCTTC 319

(2) INFORMATION FOR SEQ ID NO: 4319:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 368 base pairs  
 40 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4319:

AGGTGCATTG AGAGAATTG TAAATGACGT ATTAGSACCT CAAGACGATA TTAATAAATT 60  
 50 TGAATACCTA AAAAAATCTT CTCAAAATAC AGGTACTGTC AATTATTGGT ATTCACCTTA 120  
 AAGATCATGA TGATTATAA CAACTCAAAC AACGTGTnAA ATCATTTCGA TCCTTCCAAT 180

ACAGTCATAA ATTGATTCT AATTGAAATC ATCTTATGAC TGCITTTTAT TATACTTTAC 300  
 ATTGTGTCGT TTGTCAGAT TGCAAAACGTT TCACTTCGC CAAGCCCATC TTTcTTGgn 360  
 5 GTTTGCCT 368

(2) INFORMATION FOR SEQ ID NO: 4320:

(i) SEQUENCE CHARACTERISTICS:  
 10 (A) LENGTH: 347 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4320:

TAAGITAGCT ACCATCCTCG CTAAGAACCT TTCTTGACTT GTGACAATCG CTGCTTCTT 60  
 20 TCCTCTCCTT CGGCTCTCGC TTACTCAATT AGCTCTACTA AACTCGTTGC GCTCTTTTCT 120  
 CGTITCGTCA GAITCAAACG TTITCACTTC GCCAAGCCAT TTITCTTTGT GTTTACTTTT 180  
 TATTITGACG TTTTAGACAT AAAAAAAGAG ACCTCACGGT CTCACCTTGC CTGGCAACGT 240  
 25 TCTACTCTAG CGGAAnTAA GTTGnCTAC CATCGTCGCT AAAGACCTTT CTTGACTTGT 300  
 GACAATCGCT TGCTTCTTTT CCTCTCCTnC GGCTCTCGGT TAACTCA 347

(2) INFORMATION FOR SEQ ID NO: 4321:

(i) SEQUENCE CHARACTERISTICS:  
 30 (A) LENGTH: 334 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 35 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4321:

GGGCAAGTTA CAGTGGTGCA TGGTTGTCGT CACTCGTGTC GTGAGATGTT GGGTTAAGTC 60  
 CCnCAACGAG CGGCAACCTT TAAGCTTAGT TGCCATCATT AAGTTGGGCA CTCtAAGTTG 120  
 45 ACTGCGGGT ACAAAACGTA GGAAGGTGG GATGACGTCA AATCATCATG CCCCTTATGA 180  
 TTTGGcTACA CACGTGCTAC AATGGACAAT ACAAAAGGCA GCGAAACCGC GAGTcaAGCA 240  
 AATCCCAATA AGTTGTCTCT AGTTCGGATT GTAGTCTGCA ACTCGaCTaC ATGaAGCTGG 300  
 50 aATCGCTaGT aATCgTGGTC CAGCATGCTA CGGT 334

(2) INFORMATION FOR SEQ ID NO: 4322:

(i) SEQUENCE CHARACTERISTICS:  
 55 (A) LENGTH: 330 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4322:

CTGTTAAACG ACTACAGGAA GTATTTACAA TCAAACTAAG CAAAAGTATT CAGATGCCTC 60  
AGATAAAGCT TGGGCGCATT CAAAATCTAT TTGGAGAGGC ACATCAAAAT GGTTTAGCAA 120  
CGATATAAAA GTGCAAGGG TTGGCTAATA GATATGGCTA ATAAATCGCG CTCGAAATGG 180  
GATAATATTT CTAGTACAGC ATGGTCGAAT GCAAAATCCG TTTGGAAnGG AGCATCGAAA 240  
TGGTTIAGTA nCTCATTACA AnTCTTTAAA GGGTTGACT GGGGATATGT ATTCAGAGCC 300  
CAOGATCGTT TTGATGCATT TCAGTTCGGC 330

20

(2) INFORMATION FOR SEQ ID NO: 4323:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 337 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4323:

CAATGATGCC ATGAGCAGTG CCTCCTTTAA TAGCATTTTA GCACTGTTTT GTCGTATTTT 60  
TAAATATAAA TTGGAATGA ATAATAAAGT AGTGATTAAA TTAAGTTGTG TGATAGGAAA 120  
CTTGGACATC AATCAAAGTA ATAGGCACTA CAACGCTTAT TGGCGGGGCC CCAACAAGAA 180  
AGCTGACGAA AAGTCACTTG CAATAATGTG CAAGTcngGG ATGGGCCCCA ACATAGAGAA 240  
ATTGGGTCCG nAATTCTTAC AGACAATGCC AGTTGGCGGG GCCCCCACAT AGAGAATTTT 300  
GAAAAGGAAT TCTACCAGCA ATGCCAGTTG GGGGAnG 337

40

(2) INFORMATION FOR SEQ ID NO: 4324:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 330 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4324:

TTACTTACTA TCTAGTTTTG AATGTATAAA TTACATTCAT ATGTCTGGTG ACTATAGCAA 60  
GGAGGTCACA CTGTTCCTCA TGCCGAACAC AGAAGTTAAG CTCTTAGCGT TCGATGGTAG 120

55

	GCATTGAGAC CGCAAGnTCT TTTTTTATG TCTAAACGT CAAAATAAAA AGCAAACACA	240
	AAGAAAAATG GCTTGGCGAA GTGAAAACGT TTGAATCTGC CGAACGAGAA AGAGCGnACC	300
5	GAGTTTAGTA GAnTAAATGA GTAAGCGAGA	330
	(2) INFORMATION FOR SEQ ID NO: 4325:	
	(i) SEQUENCE CHARACTERISTICS:	
10	(A) LENGTH: 315 base pairs	
	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: double	
	(D) TOPOLOGY: linear	
15	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4325:	
	TTTCATCCGCT CACTTTTCAA CGTAATCGGT TCGGTCTCC ATTCAAGTGT ACCTGAACTT	60
20	CAACCTGACC AAGGGTAGAT CACCTGGTTT CnGGTCTACG ACAAATACTA AACGCCCTAT	120
	TCAGACTCGC TTTGCTACG GCTCCACATT TACTGCTTAA CCTTGACATC AAATCGTAAC	180
	TCGCCGGTTC ATTCTACAAA AGGCACGCCA TCACCCATTA ACGGGCTCTG ACTACTTGTA	240
25	AGCACACGGT TTCAGGTTG ATTTCCTCC CTTCCGGGG TGGCTTTTCA nCTTCCCTC	300
	ACGnACTGG TTCAC	315
	(2) INFORMATION FOR SEQ ID NO: 4326:	
30	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 309 base pairs	
	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: double	
35	(D) TOPOLOGY: linear	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4326:	
40	TATTTTGACG TTTTAGACAT AAAAAAGAG ACCTTGGCGT TAnATGCGGC TCATCGCATC	60
	CACTTTTTCG CTGGCAACGT TCTACTCTAG CGGAACGTAA GtnGAACTAC CATCGACGCT	120
	AAGGAGCTTA ACTTCTGTGT TCGGCATGGG AACAGGTGTG ACCTCCTTGC TATAGTCACC	180
45	AGACATATGA ATGTAAATTA TACATTCAA ACTAGATAGT AAGTAAAGT GTTTTGCTTC	240
	GCAAAACCAT TTATTTTGAT TAAGTCTTCG ATCGnTAGT ATTGTCACAA TCCATAGTC	300
50	ACCATGCTT	309
	(2) INFORMATION FOR SEQ ID NO: 4327:	
	(i) SEQUENCE CHARACTERISTICS:	
55	(A) LENGTH: 311 base pairs	

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4327:

AAAGCTTATA AACGCTCATC TGACATTGTA GAATTCATGC TTTCAAAAGA CGATATACTA 60  
CGACACTCCT ACGAACTTGT CCAAGGATTA CGAAAAGACC TAAGTTATG TAATTGCGCT 120  
AAATTTATTA ATCGTTTAAA TTCAGTTAGT AAAAAGTCTG TGAGTAAGGG TGTATGGAAA 180  
GTGGTTAAAT ATTATAGAAA ACATCAAAGG ATGTTAAGAA ATACAATTTA TTACCCAGCA 240  
TTTAATAATG GTGCTATAGA AGGAATTAAT AATAAGAThA AATTAATCAA GTGAATTCTT 300  
TTTGGTThCA G 311

(2) INFORMATION FOR SEQ ID NO: 4328:

20

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 340 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4328:

TAGCTTCTGC GAGCTAGCGG AATCGAAGCC CCAGTAAACG GCGGCCGTAA CTATAACGGT 60  
CCTAAGGTAG CGAAATTCCT TGTCGGGTAA GTTCCGACCC GCACGAAAGG CGTAACGATT 120  
TGGGCACTGT CTCAACGAGA GACTCGGTGA AATCATAGTA CCTGTGAAGA TGCAGGTTAC 180  
CGCGCAGAG ACGGAAAGAC CCCGTGGAGC TTTACTGTAG CCTGATATTG AAATTCGGCA 240  
CAGCTTGTAC AGSATAGTAG GAGCTTTGAA ACGTGAGCGC TACTTACGTG GAGGCGCTGG 300  
TGGGATACTA CCTAGCTGT TTTGGTThCT hACCCGACCA 340

40

(2) INFORMATION FOR SEQ ID NO: 4329:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 325 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4329:

AAATCCATAGC GAAATGTATA CCATCACCCA TGCCTCCTTC TAAAGGTAAA TCTCTACCTT 60  
TTTGTGCACC AGTACATAAT ATAATGGCAT CATACTCAGA TTCTAACGTT GCTTTATCAA 120

55

TACGACGTCG AACCATCTT TTATCAAGTT TCATATTCGG AATACCATAC ATTAATAAAC 240  
 CGCCTGATTC TCTAGCAGCT TCATAAATAG TTACTTgntA TCCTnGTAGA TTAAGTTCTT 300  
 5 CAGCAGCAGT AATCCTGnTG GACCG 325

(2) INFORMATION FOR SEQ ID NO: 4330:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 327 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4330:

CAC TTCACCA CAGCGCCAT GGCAGGnGCA GTAGGAATCG AACCCACACC AAAGGTTTTG 60  
 20 GAGACCTCTA TTCTACCGTT GAACATATGCC CCTATTAAAA ATAATAAATG GAGGGGGGCA 120  
 GATTGAACT GCGAACCCTG AAGAGCGGAT TTACAGTCGG CCGCGTTTAA CCACCTTCGT 180  
 ACCCTCCAT AAATGGTGGC GCGGnGnAGG ACTTGAACCC CCCAACCTAC TGATTACAAG 240  
 25 TCAGTTGCTC TGACCAATTG AGCTAAGGCC GGCTAAGAAA TGGTTCAGG ACAGAGTCGA 300  
 AACTGCCGAC ACATGGGAGC TTCAAT 327

(2) INFORMATION FOR SEQ ID NO: 4331:

30 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 35 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4331:

40 GCATCATTTT CAGCTTCCCA CTTCACATTT TGGAAAAATT CTCCAGTAAC AATGAAAGAC 60  
 CATATACTTT TTCTCAAAAG AGCAGGACCC GGTAAACAATA CAGGTTGGTA ATGCCCAATA 120  
 45 ATAATGACCA TTTCCTCAAT GCCTAAGAAA ATAATAAATG TGATAATAGG TAATATAAAT 180  
 TTGTTATTGT TGGGACGTGT CATGAACGCG ATGCCTCCTT ATACAATGAC GGTTCACAA 240  
 AGTCATCATA TGCAGGTGGA TTAACAAAAT GATGTTGTTT TACCAATGTC GTAATTTCTT 300  
 50 GGATAGCCGG ATGnTTAAAT TTGTTAAAT CACCATAGGG TGTCCTCnGCC GTGGACTGTG 360  
 GTTAAAAACG TCACGACTT TGTTTAAAnn GGTGCTCAT 400

(2) INFORMATION FOR SEQ ID NO: 4332:

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(A) LENGTH: 366 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4332:

10 CTGGTATGCA GATTACCAC CTGCCTCTCC ACAAnThnGG GGAGAGCAAA CAGATGTGCC 60  
 TGAATCAAGT GACTGGTATA ACGCATCATA CATTATTATG TGGGGCTCTA ATGTACCTTT 120  
 AACACGTACT CCGGATGCAC ATTTTATGAC TGAAGTCGCG TATAAAGGTA CAAAGTCAT 180  
 15 TTCAGTAGCA CCAGATTACG CAGAAAATGT GAAATTGTGA GATAACTGGC TAGCACCAGAA 240  
 TCCTGGTTCA GATGCTGCAA TTGCACAAGC AATGACGGCA TGTTATTTTA CAAGGAACAT 300  
 TATGTTAAAT CCAACTGAA TGAACGGTTT TTATTAAATT ACGGTTAAAA CCATTATTAC 360  
 20 CAGGAT 366

(2) INFORMATION FOR SEQ ID NO: 4333:

25 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4333:

TATTATTCA TTGAGCAGAA AGAAAATTAT GGCACCAAACT TTTAATATTT TTTTCAATGT 60  
 35 CATCTCTTTT AnGGGAGTGG GACAGAAATG ATATTTTCGC AAAATTATTT TCGTCGTCCC 120  
 ACCCCAACCT CACATTGCTG TAGAAATTGG GAATCCAATT TCTCTTTGTT GGGGCCCATC 180  
 CCCAACTTGG CACATTATTT TGAAGCTGAC TTTTCGTGAC TTGCTGTGTT GGGGCCCTCA 240  
 40 CCCCAACTCG CATTGCTGT AGAATTTCTT TTCGAAATTC TCTGTGTGG GGGCCCTGGA 300  
 CTGAGAATTG GAAAAAAGCT TGTTGACAAG CGnATTTCG GTTCCATGCA ACTGACTGCC 360  
 45 AAGAGAACnT CGTGAGAGCh ATGAAGAAGA TTGATTTTGA 400

(2) INFORMATION FOR SEQ ID NO: 4334:

50 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 309 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

55

CGCCCTTAAT AACTTAATCT ATGTTTCCAT CCTACAGGAA ACGCGTTATT AATCTTGIGA 60  
 GTGTTCTTTC GAACnTATGC GATTATTCTT TATGAATTCA AGCTTATTTA AAACCTTTTA 120  
 5 TTCACCTCGT TTTGCTTGGT AAAATCTATA TnTTACTTAC TTATCTAGTT TTCAATGTAC 180  
 AATTCTCTTT TAGTCAAGCG CTCGCATAAG CAATATCACT TTAACCAAAA AATATTGAA 240  
 10 TGTTAAATAA ACATTCAAAA CTGAATACAA TATGTCACAT TATTCGCGCA TCTTCTGnAA 300  
 GAAGATGTT 309

(2) INFORMATION FOR SEQ ID NO: 4335:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 329 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4335:

nAGGACTTTT CTCGGTCAGT GTGAAAATCA ACGCACTCGT AnACACAATG TCTTCTCCCC 60  
 25 ATCAGAGCTC AGCCITTAACG AGTACCGGTA TTTGCCTAAT ACTCAGCCTT ACTGCTTAGA 120  
 CGTGCAATCC AATCGCACGC TTCGCTATC CTACTGCGTC CCCCCATCGA TTAAACGAT 180  
 30 TATAGTGGT ACAGGAATAT CAACCTGTTA TCCATCGCCT ACGCCTGTGC GnCTCAGCTT 240  
 AGGACCCGAC TAACCCAGAG CGGACGAGCC TTCCTCTGGA AACCTTAGTC AATCGGTGGA 300  
 CGGGATTCTC ACCCGTCTTT CGTACTCA 329

35 (2) INFORMATION FOR SEQ ID NO: 4336:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 310 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4336:

CAAAGTGACA GGTGTGTCAT GGTGTGTCGT AGCTCGTGTC GTGAGATGTT GGGTTAAGTC 60  
 CCGCAACGAG CGCAACCCCT AAGCTTAGTT GCCATCATTA AGTTGGGCAC TCTAAGTTGA 120  
 50 CTGCGCGTGA CAAACCGnnn GAAGGTGGGG ATGACGTCAA ATCATCATGC CCCTTAGTCA 180  
 TTTGGGCTAC ACACGTGCTA CAATGGGACA ATACAAAGGG CAGCGAAACC GTGAGTGCAA 240  
 GCAAAATCCCA TTAAAGTTGT TCTCAGTTGC GATTGTAGTC TGCAACTCGG ACTACATGAA 300

55



## (2) INFORMATION FOR SEQ ID NO: 4337:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 324 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4337:

```

CCAGCACCGG GGCAGGCGTC ACCCTCATAC ATCACCTTAC GGTTTAGCAG AGACCTGTGT      60
TTTTGATAAA CAGTCGCTTG GGCCTATTCA CTGCGGCTCT TCTGGGCGTT AACCTTAAAG      120
AGCACCCCTT CTCGCCAAGT TACGGGGTCA TTTTGCCGAG TTCTTTAAAC AGAGTTCGCT      180
CGCTCACCTT AGAATTCTCA TCTTGACTAC CTGTGTGGT TTGCGGTACG GGCACCTATT      240
TCTATCTAGA nGGCTTTCTC GGCAGTGTGA AATCAACGAC TCGAAGACAC AnTGGCTnCT      300
CCCATCAGAG CTCAGCCTTA ACGA                                         324

```

## (2) INFORMATION FOR SEQ ID NO: 4338:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 399 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4338:

```

CGGACATCAA ACGGATGCTG CTCGATTGGC AAATGCATAT AACTAGTAAC ATGATCATCG      60
ACATCAAATT TAGATGATCA AATGTCCCA ATcATTAAAT TGATTGCGTT GTTTGCTCAA      120
TTGATTATAT GTTTTTCCTA GCACCTCATG CGGCACCATA TCTTTACCTA GTAGCCACAA      180
AGATAAGTCT AACAAAGTGC AACCATATC GATTAAACTA CCGCCACCTT GCAACGCTTT      240
ATTGGTAAAA ACACCCGAGC CAGGCACTTT ACGCCTACGC ATCGCTTGTA CACGTGCTAC      300
TAAAGGTTTA CCAACCACAC CTGATTCAAT TGCTTTTTTA GCAGTAATTG CCACATCTGT      360
GTGACGATAA TGATATGCGC CAGTAATAnT TTGTGnTTT                          399

```

## (2) INFORMATION FOR SEQ ID NO: 4339:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 323 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4339:

5 TGAGCGGATT ATTTCTTATG AATTCAAGCT TATTTAAAC TCTTTATTCA CTCGGTTTTG 60  
 CTGGTAAAA TCTATATTTT ACTTACTTAT CTAGTTTTC AATGACAAAT AATGGTGGGC 120  
 CTAAGTGGAC TCGAACCACC GACCTCAGCG nTATCAGGCG TGCGCTCTAA CCAGCTGAGC 180  
 10 TATAGGCCCA TTTnTTGAA TGTTAAATAA ACATTCAAAA CTGGAATACA ATATGTGCAC 240  
 GTTATTCCGC ATCTTCTGAA GAAGATGTTn CCGAATATAT CCTTAGAAAG GAGGTGATCC 300  
 AGCGCACCT TCGGATACG GCT 323

## (2) INFORMATION FOR SEQ ID NO: 4340:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 344 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4340:

25 GGCTAGCCCT AAGCTATTT CGGAGAGAAC CAGCTATTT CAGGTTGAT TGAATTCTT 60  
 CCGCTACCTC CAGTTCATCC GCTCACTTT CAACGTAAGT CGGTTGGGTC TCCTATTGAG 120  
 30 TGTTACCTGA ACTTCAACCT GACCAAGGGT AGATCACCTG GTTTCGGGTC TACGACCAAA 180  
 TACTAAACGC CCTATTCAGA CTCGCTTTCG CTACGGCTCC ACATTACTG CTTAACCTTG 240  
 CATCAAAATCG TAACTCGCCG GTTCATTCTT ACAAAAGGCA CGCCATCAC CATTAAACGGG 300  
 35 CTCTGAACTA ACTTGGTAAA GcncCGGTTT nCngGTCCAA TTTT 344

## (2) INFORMATION FOR SEQ ID NO: 4341:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 351 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4341:

45 TGTACCACCT ATATCGTITT TAATCGATGG GGGAGCGCAT AGnGATAGGC GAACGTGCGA 60  
 50 TTGATTGCA CGTCTAAGCA GTAAGGCTGA GTATTAGGCA AATCCGCTAC TCGTTAAGGC 120  
 TGAGCTGTGA TGGGAGAAAG ACATTGTGTC TTCGAGTCGT TGATTTCACA CTGCCGAGAA 180  
 AAGCCTCTAG ATAGAAAATA GGTGCCCGTA CCGCAAAACG ACACAGGTAG TCAAGATGAG 240

TTChGGGAAA AAGGgTCCC CTTTAAGGGT TAACCGCCCC AAAAAACCCC C

351

(2) INFORMATION FOR SEQ ID NO: 4342:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 327 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4342:

AATAATGACT CCTACGGGAC TCGAACCGn GTTACCGCGG TGAAAGGGCG TGTACTTAAC 60  
 CGTATGACCA AGGAGCCATG GCTCACCAGG TAGGACTCGA ACCTACGACC GATCGGTAA 120  
 CAGCCGATAG CTCTACCACT GAGCTACTGT GGATTAATAT TATGCCTGGC AACGTTCTAC 180  
 TCTAGCGGAA nTAAATTCGA ACTACCATCG ACGCTAAnGA GCTTAACTTC TGTGTTCCGC 240  
 ATGGGAACAG GTGTGACCTC CTTGCTATAG TCACCAGACA TATGAATGTA ATTTATACAT 300  
 TCAAAACTAG ATAGTAAGTA AAAGTGA 327

(2) INFORMATION FOR SEQ ID NO: 4343:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 360 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4343:

ACCGCTTGGG CTGACATTTT TGGCTTGTTA AGCAGCTTGC CTACTTTTIT GGCAATAGCA 60  
 CCATACGTTG TTAGAGTCCC ATAAGGAACC TGTCTTAATT CATTCCAAAC ACAGTGTGA 120  
 AAATGACTAC CTGTGGCTT TAAAGGTATT GTGATTTCAG GATTGTCACC TTTAAATAC 180  
 GCGTCTAACC ACTGTGTGCG CTCTCTAAAT ATCGCTAAAG ACGTATTTTC TTCCCTAGTA 240  
 CCATCACCTT GTTGATTTTC AAACAAAACA GCGGTCAGAC TTACCCCATC ACTCAAAAGT 300  
 TCCAAAnCGTC CTGACAGGCG AAnCAGAGTG AACGCTGAGA CTCAGAAAAA ATCCCCCThT 360

(2) INFORMATION FOR SEQ ID NO: 4344:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 313 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4344:

ATTCGCACAT	CTCTGAAGA	AGATGTTnCC	GAATATATCC	TTAGAAAGGA	GGTGATCCAG	60
CCGCACCTTC	CGATACGnCT	ACCTTGTTAC	GACTTCACCC	CAATCATTTG	TCCCACCTTC	120
GACGGCTAGC	TCCTAAAAGG	TTACTCCACC	GGCTTCGGGT	GTTACAACT	CTCGTGGTGT	180
GACGGCGGT	GTGTACAAGA	CCCGGGAACG	TATTCACCGT	AGCATGCTGA	TCTACGATTA	240
CTAGCGATTG	CAGCTTCATG	TAGTCGAGTT	GCAGACTACA	ATCCGAACGT	AGAACAACCT	300
TATGGGATTT	GCT					313

(2) INFORMATION FOR SEQ ID NO: 4345:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 305 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4345:

ATTTTATCGT	AAGATTTTT	CGCAATGAGA	TTTGATCGT	TTTTGTCCAC	TACAATATCT	60
AATAGTTTTA	CTTTAAGTCC	AGCATTACACA	AAAAGTGCTG	CCAGTTGAGC	GCCCATTGTG	120
CCTGGCGCAA	GAACGGTTAC	TTTATTAATT	GTCATAGTGA	TTCTCCAAAT	TTAGTTGAGG	180
ATAAGATAAC	CATTAAGATA	ATTGGAATAA	CGTTGCTATT	TTATAAAATT	AATTAAGTAT	240
CTTTGACAGT	CATCTTAGCC	TCTTATTAA	GGnAAAAGCn	TTATGCTTAA	nATAAGTCTT	300
TTTTA						305

(2) INFORMATION FOR SEQ ID NO: 4346:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4346:

GTCAGTTATG	GCAAGTGCAT	CAACATTTTC	AGACACAGCA	AGTCTTACGG	CATCTTCTAT	60
TTTTAAGCTT	GAATTTAACA	AATCATAAGC	CGTATGAATA	TTTAAATATG	CCACCATGAT	120
TGAATGnCC	CTTCTTATTA	GTTAAGTTTG	TGCGTAAAGC	TGTAGCAAGT	TGCTCAAATT	180
CATCCCCAGC	TGTCCACTGA	AACTCCTGGA	CGCATTTCGGA	TGAnCAACGC	CAACCAAAAT	240

AnTACCTTCA TCGACTGCAA ATACCCATAA TTTCAGCCT TGATGTCAGC AATGTAATAA 360  
 CCAACTGAGA TGCTCAITGG CTGATACGAT GATCCATACA 400

5 (2) INFORMATION FOR SEQ ID NO: 4347:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 337 base pairs  
 (B) TYPE: nucleic acid  
 10 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4347:

15 TCTGGGTTGA GTCGGGTCTT AAGCTGAGGC CGACAGTAG GCGATGGATA ACAGGTGTAT 60  
 ATTCCTGTAC CACCTATAAT CGTTTAAATC GATGGGGGGA CGCATAGGGA TAGGCGAnGT 120  
 20 GCGGATTGGA TTGCAGTCTT AAGCAGTAAG GCTGAGTATT AGGCAAAATCC GGTACTCGTT 180  
 AAGGCTGAGC TGTGATGGG AGAAGACATT GTGCTTCGA GTCGTTGATT TCACACTGGC 240  
 CGAGAAAAGC CTCTAGATAG AAATAnGTGC CGTACCAGA ACCGACACAG GTAGTCCAAG 300  
 25 ATGAGATTCh TAAGTGGAG CGACGAATCT CGTTAA 337

(2) INFORMATION FOR SEQ ID NO: 4348:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 318 base pairs  
 30 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4348:

GTAAAGACAC CGCCCTTCA CGGCGTAACA CGGTTTCGAG TCCCGTAGAG GTCACCATTT 60  
 40 TTTAGGTCTC GTAGTGTAGC GATTAACAGC CCTGCCTGTC ACGCAGAGAT CGGGGTTGCG 120  
 ATTCGCTCG AGACCGTACA AATGCCTATC CAAGAGGATA GnatTTTTTT TGCGTTTAAAT 180  
 ATTATATTAA TAAAAGATAT ATGGACGAAT GATAATCATA TTGATTTATC TGTTGCTCCA 240  
 45 TTTTCTTTAA AATGTATGAA CCTCAAGTAA CTTAGTGGTT GGATATGAAA GATAAACGTh 300  
 GACAATAAAA TCTTTATT 318

(2) INFORMATION FOR SEQ ID NO: 4349:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 319 base pairs  
 50 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4349:

CTTTAAAGCA CGTATAATGA TGATTTTCAG CTTGTACAAA GGAGAAAAAA AGAAGACAAC	60
CAAGCCCAAT AATGGACTGG CGCCTAATA ATAAAGCTC TAAAGTTGT ATTTTAAAAA	120
TAGTTCTTTA AATTATATAC CCACCACATT TGGTgNAGnA ACCTAAAAAA AnGCACTTCC	180
CAAAAAATGGA AAGTGAAGT AGTGAGCCAT AGAGGATTCG AACCTCTGAC CCTCTGATTA	240
AAAGTCAGAT GCTCTACCAA CTGAGCTAAA TGGCTCTAAA TGGCTGGGT AGCTGGGATT	300
CGAACCAACG AGTGACGA	319

(2) INFORMATION FOR SEQ ID NO: 4350:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 346 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4350:

ACTTCGCTAC CCTCCAGCT TATTCATATA ATTTAATAAT CAAATGGTG GAGAATGACG	60
GGTTCGAACC GCGGACCCTC TGCTTGTAAG GCAGATGCTC TCCAGCTGA GCTAATTCTC	120
CAAAATAATG ACTCTACGG GACTCGAACC CGTGTTACCG CCGTGAAAGG GCGGTGCTTT	180
AACCGCTTGA CCAAGGAGCC ATGGCTCCAC AGGTAGGACT CGAACCTACG ACCGATCGGT	240
TAAACAGCCGA TAGCTCTACC ACTGnAGCTA CTGTGGATTG AATCATTATG CCTGGCAACG	300
TTCTTACTAT AGCGGAAnGT CAAGTTCCGC ATnACCATAC GAAGCT	346

(2) INFORMATION FOR SEQ ID NO: 4351:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 305 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4351:

ACGTCCTTCA TCGCTTCTA GTGCCAAGGC ATCCACCGTG CGCCTTAAAT AACTTAATCT	60
ATGTTTCCAC CATTTTTATA AGTnAAAGT TAACATGAAG TTACGTCTT TTATAAAAAAG	120
ATTTAAACGC GTTATTAATC TTGTGAGTGT TCTTTGGAAC ACTAGCGATT ATTTCTTATG	180

	ACTTACTTAT CTAGTTTCA ATGTACAAAT AATGSTGGGA GACTAGCGGG ATCGAACCCG	300
	TGACC	305
5	(2) INFORMATION FOR SEQ ID NO: 4352:	
	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 302 base pairs	
	(B) TYPE: nucleic acid	
10	(C) STRANDEDNESS: double	
	(D) TOPOLOGY: linear	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4352:	
15	GTTCATCAAT TGCTAATCC AGTCGCGCTA ACGGATCAAT TTCATCCGCA TGTATTTTCA	60
	CTTTAAACCC TGGCTTCTTT GGCCTTTTGC ATATAATGTT GCGATTGTTT TATTGTAAAT	120
20	ACACCTGTTT CACAGAAAAAT ATCCGCAAAAG TCTGCATATT GTTTTACTTC CGGAAGTAAC	180
	GCAATCATTT CTTCATAAAA TGCCTCATTT GAACTTGCCT CTTTAGGTAC AGCATGAGGC	240
	CCTAGGAAAG TATGTTTCAT GTCTAAATCA TATTTCTCAG CTAAACGATT AGnCACTTTC	300
25	AA	302
	(2) INFORMATION FOR SEQ ID NO: 4353:	
	(i) SEQUENCE CHARACTERISTICS:	
30	(A) LENGTH: 411 base pairs	
	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: double	
	(D) TOPOLOGY: linear	
35	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4353:	
	TCTACCGCTG AACTACTTCT GCGGGTGAAG GGAGTGAAC CCCCACGCCG TAnnTGAGGA	60
40	TCCTAAGTCT AGTGCCTCTG CCAATTCCGC CACACCGCA AATGGTGAGC CATAGAGGAT	120
	TCGAACCTCT GACCCTCTGA TTAAGTCTCA GATGCTCTAC CAACTGAGCT AATGGCTCTT	180
	CCATGGTGCC GGCCAGAGGA CTTGAACCCC CAACCTACTG ATTACAAGTC AGTTGCTCTA	240
45	CCAATTGAGC TAGGCCGCGCA ATATGTAAGA ATAAATGGTG GAGAATGACG GGTTCGAACC	300
	GCGGACCTCT TGCTTGTAAG GCAGATGCTC TCCGAGTGA GCTAATTCTC CGnTTTAAAA	360
	CTGTGGGChA CGGTCTAnTC TAAGGGGACG TAAGGTCGAC TACCATCGAC G	411
50	(2) INFORMATION FOR SEQ ID NO: 4354:	
	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 367 base pairs	
55		

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4354:

TGCTTAGATG CTTTCAGCAC TTATCCCGTC CACACATAGC TACCAGCTA TGCCGTTGGA 60  
CGACAACCTGG TACACCAGAG GTATGTCCAT CCGGTCCTC TCGTACTAAG GACAGCTCCT 120  
CTCAAAATTC CTACAGCCAC GACGGATAGG GACCGAACTG TCTCACGACG TTCTGAACCC 180  
AGCTCGCGTa CCGCTTTAAT GGGCGAACAG ACAAGCCCTT GGGGACCGAC TACAGCCCCA 240  
GGATGCGATG AGCCGACATC GAGGTGCCAA ACCTnCCCGT CGATGTGAAC TCTTGSGGGA 300  
GATAAGnCTG TTATCCCCGG GGTAACTTTT ATCCGTTGAG CGATGGGCCC TTACCATGCG 360  
GAAACCA 367

20

(2) INFORMATION FOR SEQ ID NO: 4355:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 313 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4355:

GTATTTTAAA TCATAGTGGT TTATGCGTCT TTTCAAAT CTATAAAAAA TCGGATGACG 60  
TGTAATCTGC CATAGATTAA CACATTCATC CGATTATATA TAATAAGATA GACTAACATT 120  
TATTGAGAGC GGGACGGAAA TGATAAAGAA CGACTAATGA TTGATTATGT AGCGATTCTT 180  
TATCATTAGT CACAGCTAAT GTGTACTTAA AAATATGAAT GCATGAGTTA CACTCAnATT 240  
AGAGGAAATA CTAATTTCTA AAGAAAAAGT ATTTCITTAT GTTGGGGnCC ACCCCCACTT 300  
GnCATGTCT GTT 313

40

(2) INFORMATION FOR SEQ ID NO: 4356:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 335 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4356:

GGGCTGGGTT CAGAACGTCG AGGCAGTTCG yTCCCTATCC GTCGTGGGCG TAGGAAATTT 60

55



TCGTGCCAAG CATAAGCTGG GTAGCTATGT GTGGACGGGA TAAGTGTCTGA AGATCTTGAA 180  
 GCATGAAGCC CCCCTCAAGA TGAGATTTC CAACTTCGGT TATAAGATCC CTCAAAGATG 240  
 5 ATGAGGTTAA TAGTTCGAG GTGnGAAGCA TGGTGACAGT GGnAGCTGAC GAATACTAAT 300  
 CGATCGAGGA CTTAATCAAA ATAAATGTTT TGCGA 335

(2) INFORMATION FOR SEQ ID NO: 4357:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 304 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4357:

20 GCTCTAAAAG TTGTATTTTA AAAATAGTTC TTAAATTAT ATACCCACCA CATTGTGTGn 60  
 nGAACCTAAA AAAAGCACT TCCCAAAAAT GGAAAGTGCA AGTAGTGAGC CATAGAGGAT 120  
 TCGAACCTCT GACCTCTGA TTAAGTCA GATGCTCTAC CAACTGAGCT AATGGCTCTA 180  
 25 ATGGCTGGGC TAGCTGGATT CGAACCAACG AGTGACGGAT nAAAGTCCGT TGCCTTACCG 240  
 CTTGGCTATA GCCCAATATA TAGATGGTGG AGGGGGGCAG ATTCTGAACCTG CCGAACCCGA 300  
 AGAG 304

30 (2) INFORMATION FOR SEQ ID NO: 4358:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 302 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4358:

40 ATAATGGTGA CGTTGATGAT GCATTAACAC AAGGTAAGC AGCAATTGAT GCTATTCAAG 60  
 TAGATGCTAC TGTTAAACCT AAAGCGAACC AAGCTATTGA AGTTAAAGCA GAAGATACGA 120  
 45 AAGAATCTAT TGATCAAAGT GACCAGTTAA CTGCTGAAGA AAAAATGAA GCATTAGCAA 180  
 TGATTAAACA AATTACAGAT CAAGCTAAAC AAGGTATTAC TGATGCAACA ACAACTGCTG 240  
 AAGTTGAAAA AGCGAAACTC AAGGACTTGA AGCATTGAT AACATTCAAn TCGACTCAnC 300  
 50 AG 302

(2) INFORMATION FOR SEQ ID NO: 4359:

55

(A) LENGTH: 350 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4359:

10 GGTGGGAAA TCATTGCATG AGAGTGTGAA AGGGCATAAG GGGAGCTTGG ACTGCGAGAC 60  
 CTACAAGTCG AGCAGGGTCG AAAGAGGACT TAGTGATCCG GTGGTTCCGC ATGGAAGGGC 120  
 CATCGCTCAA CGGATAAAAG CTACCCCGGG GATAACAGGC TTATCTCCCC CAAGAGTTCA 180  
 15 CATCGACGGG GAAGTTTGGC ACCTCGATGT CGGCTCATCG CATCTGGGG CTGTAGTCGG 240  
 TCCCAGGGT TGGGCTGTTT GCCCATTAAA GCGGTACaG GCTGGGTTCA GAACGTCGTn 300  
 AGAAAGTTTC GTCCCTATCC GTCTGGGGC GTAGGAAATT TnGAGAGGAG 350

20

(2) INFORMATION FOR SEQ ID NO: 4360:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 329 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4360:

30 AGTCCTAAA AGGTACTCC ACCGGCTTCG GGTGTTACAA ACTCTCGTGG TGTGACGGGC 60  
 GGTGTGTACA AGACCCGGA ACGTATTCAC CGTAGCATGC TGATCTACGA TTAGTAGCGA 120  
 35 TTCCAGCTTC ATGTAGTCGA GTTGCACT CACAATCCGA ACTGAGAACA ACTTTATGGT 180  
 ATTTGCTTGC ACCTGnGGT TTCGCTGTC CTTTGTATTG TCATTGTCA GCACGTGTGT 240  
 AGCCCAAATC ATAAGGGCA TGATGATTG GACGTTATC CCCaTCTCC TCCGnTTGT 300  
 40 ACACCGCAG TTCAACTTAG AGTGCCCAA 329

40

(2) INFORMATION FOR SEQ ID NO: 4361:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 424 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4361:

50 AGACATAAAA AAAGAGACCT CACGGTCTCA ACTTGCTTGG CAACGTTCTA CTCTAGCGGA 60

55

CTnTCTCTC CTTCGGCTCT CGCTTACTCA TTtAGCTCTA CTAAACTCGT TGCCTCTTT 180  
 TCTCGTTTCG TCAGATTCAA ACGTTTTTCAC TnCGnCAAGC CATTTTTCTT TGTGTTTACT 240  
 5 TTTTATTTTG ACGTTTTTAGG CATAAAAAAA wGAGAcCTTG CGGTCTCAAT GCGGCTCATC 300  
 GCATCCATTT TTTGCCTGGC AACGTTCTAC TCTAGCGGAA CGTAAGTTGG GCTAACCAAG 360  
 10 TCGCCAAAGA CCTTTCTGA CTGTGTGACAA TCGGCTTGCT TCTTCTCTCT CCTTCGGCTC 420  
 TCGC 424

(2) INFORMATION FOR SEQ ID NO: 4362:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 316 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 20 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4362:

25 CACAACAAGT ATCTAAGATA CTGCCGGAAG ATTGTACAG ACGGTAGGGG AAGGGGGTCA 60  
 CGGTAGACGAC CCAACATGTG GTTCGGGTTT ATnGTGTGTA CGTGTGTGTA AAGAAACGCA 120  
 ATThAnTCGT TATTTCGGAC AAGAACGTAA CAATACTACA TACAACTTAG CACCATGAAT 180  
 30 ATGTTATTAC ATGATGTGCG TTATGAGAAC TTCGAGATCC GTAATGATGA CACATTGGAA 240  
 AATCCAGCCT TTTTAGGCAA TACATTTGAT GCGGTTATTG CGAACCATAC AGTGCAGAAAT 300  
 TGGACAGCAG ATTCCA 316

35 (2) INFORMATION FOR SEQ ID NO: 4363:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 318 base pairs  
 40 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4363:

45 GGGTACTAAG ATGTTTCAGT TCTCCGGGTG TGCCTTCTGA TATGCTATGT ATTCACATAT 60  
 CGATAACATG ACATAACTCA TGCTGGGTTT CCCCATTCGG AAATCTCTGG ATCAAAGCTT 120  
 50 ACTTACAGCT CCCCAAAGCA TATCGTCGTT AGTAACGTCC TTCATCGGCT TCTAGTGCCA 180  
 AGGCATCCAC CGTGCGCCCT TGAATAACTT AATCTATGTT TCCATCCTAC AGGAAACGCG 240  
 55 TTGATTAATC TTGTGGAGTG TTCTTTCGAA CATAGCGAAT ATnTCTTATG GAATTCAGC 300

## (2) INFORMATION FOR SEQ ID NO: 4364:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 313 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4364:

```

ntGCACCTTAA GAACITAGAC GATCGTGGTA TCGITTATAT TGGTGCAGAA GTAAAAGATG      60
GAGATATTTT AGTTGGTAAA GTAACGCCTA AAGGTGTACT GCAGTTAACT GCCGAAGAAaA      120
GATTGTCAAC TGCAATCTTT GGGTGAAAAA GCACGTGAAG TTAGAGnATA CTTCATTACG      180
TGTACCTCAC GGCCTGGCGC GGTATCGTTC TTGCATGTTA AAAGTATTCC AATCGTGCAA      240
GAAGGGCGAC GATACATTAT CCACCTGGTG TTAAACCAAT TTAGTACGT GGTATATATC      300
GTCCAAAAA CGT                                     313

```

## (2) INFORMATION FOR SEQ ID NO: 4365:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 310 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4365:

```

AACCATTGCA TGCAATAGCG TCATTCTTGG ATATTAATCC CTAAATTGCC GTGATATCCC      60
GGCTCTATCT TGGCCTGTTT CAATCACTAA ATGCGTITTA CTACTTACAC CACTACGGGC      120
TAGTTAATAG TCGACATAG CCCTCTGGTA TGCTTACAGC TACATCTGTn TTAATCACTG      180
CCTTTTCTTG TGGCTCAAGT ACGACAGTTC AGCTGAGAAT ATGTCATAAC CTGCATCCGn      240
CTTATGATTT CGTTCGGGCA TTCTAGCATT TTCTGATAAT AGCCTTACTT GTAATGTGTn      300
AGTCATTTTC                                     310

```

## (2) INFORMATION FOR SEQ ID NO: 4366:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

AGTGGTACTT CTGTTAATTG GTGAATTGG ATACTGGTTA TATTCAGCTG CACCGCAAGC 60  
 AACTTCTATT GATGGCCTAA CTGCCTTTTT ACCTCAAGCA ATGGGTATGG TAATTGTTGC 120  
 5 AGTCATTTAT GGCCTTTATGA ATATGAAAGC AGAAGATCCA TTCCGTAATA AAATTACGTG 180  
 GTTACAAATT ATTTCAAGTT TCTTCTTTGC ATTTGGTGCT TTAACATATC TTATTTCAAGC 240  
 10 ACAACCTAAT ATGAATGGTT TAGCACTGGA TTTATCCTTC TCAACATCCG TGGTGCTGCT 300  
 ACATTAAAGG TAITTAATTCT TAAACCATAT AAACGTCAAA GAATGGTAAT ACAATCACGG 360  
 CTAGTACCAT TTAGTAGCCG CTCCTACCG nAATTATAAA 400

15 (2) INFORMATION FOR SEQ ID NO: 4367:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 326 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 20 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4367:

25 CACCTGGACG AACCGTTTT AGATCGTATT CAATTGAAAA GGCCGGTATT GAATGAATCA 60  
 CACTTAGCAG CGATTGATCA GGAACATTTT AAATTAACCT ATTTATCAAC GGTATATGAA 120  
 30 GGGGATTTGG AAGATGCGTT AGAAGCATTA TGCCGAGAAG CAGTGAATGC TGTAAACAAG 180  
 GCGCTCAAAT TCTAGTGTTA GATGATAGTG GATTAGTTGA TAGCAATGCG TTTGCAATGC 240  
 CGATGTTACT CGCnATAAGT CATGTGCATC AATTACTTAT TAAAGCAGAT TACGnATGnC 300  
 35 TACAAATTTA ATCGCTAAAT CTGGTG 326

(2) INFORMATION FOR SEQ ID NO: 4368:

- (i) SEQUENCE CHARACTERISTICS:  
 40 (A) LENGTH: 307 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4368:

ATTATAGCCG AAATGCCCAA AATAGATTTT GACGAATATT ACGAATGTTT GCTTTACTTG 60  
 50 CATAAATGGC TTTAGGAATA AGCATCAAGT CGCCACCAAG AATAGTAATA TCAGCTGCTT 120  
 CAATGGCAAC TTCTGTACCT GTAnCAATGG CGATACCGAT ATCAGCTTTA ACTAATGCAAG 180  
 GTGCATCATT TACACCGTCA CCAACCATCG CAACCTTCTT ACCTTGTTCG TGTAGTTTCG 240

GTTTTGC

307

## (2) INFORMATION FOR SEQ ID NO: 4369:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 396 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4369:

TTCTTCTCT	TCCTCCGGT	ACTAAGATGT	TTCAGITCAC	CGGGTGTGCC	TTCTGATATG	60
CTATGTATTC	ACATATCGAT	AACATGACAT	AATCATGCT	GGGTTCCCC	ATTCGGAAAT	120
CTCTGGATCA	AAGCTTACTT	ACAGCTCCCC	AAAGCATATC	GTCTTAGTA	ACGTCCTCA	180
TCGGCTTCTA	GTGCCAAGC	ATCCACCGTG	CGCCCTTAAT	AACTTAATCT	ATGTTTCCAT	240
CCTACAGAA	AQCGTTATT	AATCTTGTA	GTGTTCTTC	GAACAyTAGC	GATTATTCT	300
TATGAATCA	AGCTTATTTA	AAACTCCTTA	TTCAATCGGT	TTTGCTTGGG	TAAAATCCTA	360
TATTTTACht	ACChTATCGA	GTTTTCAATG	TAACAA			396

## (2) INFORMATION FOR SEQ ID NO: 4370:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 315 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4370:

CAGTAAGATA	ATTTTCAATT	AGAAAAATATC	TTACTGTCTGT	TCTCTATTTA	TACAATACTT	60
CGTATTGAAT	GGCTTCGCTT	TCCTAGGGTG	CCGTCTCAGC	CTCGGTCTTC	GACTGGCACT	120
GCTCCCTCAG	GAGTCTCGCC	ATTAATACTA	CGTATTAACA	TGTAATTTTA	CTTTTACATA	180
CTTTTAAAAA	ATAAGACACT	TTGCCAAACT	TGCACATAAA	TGTTTAATTC	AATAATTGGA	240
ATTTTCTGTG	TTGGTGCCCT	TCGTATAATT	TAATAAATAC	CACTAAACTA	AaTTATGAA	300
GTGCCTTATG	TATAA					315

## (2) INFORMATION FOR SEQ ID NO: 4371:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 322 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4371:

5 GTCGTCAAAT GTACCTTCAC CAAGTAGTGA TGTACATATT TACCGCCTTG TTCAACAGCA 60  
 CGTGTGCGGC CACCTGTAAT CGCAATGACA GGTATGCGTT CAnATATGAA CTGCGATAC 120  
 10 CGTTGACGGC ACTTAATTCG CCAACACCAA ATGTAGTAAC TAATGCACGG AGTCCATTAA 180  
 GACGGGCATA ACGTCCGCT GCGTAACTTG CGTTTAATTC ATTTGTATTT CCTACCCAAT 240  
 CTACAATGGG GTTGCTGATA ATATCGTCTA GAAAAGCGAG ATTAAATCA CCAGGGnCAC 300  
 15 CAAAAATTTT ATCGACGGCh TG 322

(2) INFORMATION FOR SEQ ID NO: 4372:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 327 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4372:

25 CCTAAGTCTA GTGCGTCTGC CAATTCCGCC ACACCGCAA ATGGTGAGCC ATAGAGGATT 60  
 CGAACCTCTG ACCCTCTGAT TAAAnAGTCAG ATGCTCTACC AACTGAGChA ATGGCTCTTC 120  
 30 CATGGTGCCG GCCAGAGGAC TTGAACCCCC AACCTACTGA TTACAAGTCA GTTTGCTCTA 180  
 CCAATTGAGC TAGGCCGGCA ATATGTAAAG AATAAATGOT GGGAGAATGA CGGGTTCGnA 240  
 35 ACGGCGGAAC CCTCTGCTTG TAAAGCAGAT GCTCTCCAGC TTGAGCTAAA TCTCCGATTT 300  
 AAAACTGCTG GGCAAGTTCT ACTCTAG 327

(2) INFORMATION FOR SEQ ID NO: 4373:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4373:

50 CATTITAATT TATTGTACAG AACGAAATGT GATGTTAGTA GATCATAGGG TTGATGATAA 60  
 TATTAAAGCT GAAAACGTTA TATTTATTGG CCTTTTGTGT AAACATGGAC ATTGSCATGC 120  
 AGTCATTTAT GACATTGCTC AAGACAAAAC TGCCGAACCT GAAATTGAAA ATATTATAGA 180

TCAATTTTAA AACCCCATCG ATTCCTAAAA AACAGCAGTA AGATGATTTT CAATTAGAAA 300  
 ATATCTTGCT GCTGTTCTCT ATTTATACAA TACTTCGTAT TGAATGGCTC GCTTTCACAG 360  
 5 GGGGCCGCTC AGCCTGGGCC TCGACTGGCA ATGCTCCCTC 400

(2) INFORMATION FOR SEQ ID NO: 4374:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 334 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4374:

TAATGGATT TTTAGTGTG GTGTCGTTAT TGTCTCTCA CTTTTTGTG CTTCCTTGT 60  
 20 TACTTTTCT GTCCCTGGTG CTAATCAGG ATTAAATTTA CGTTCCTTCT CGAATGGAAT 120  
 CTCTCTTTT TCTACAATCG AGTCTCCTTT TACAGGTCCA TATTTTGTTA CGCATTCGAC 180  
 25 CGGTGGTCTA ACTACATCTC CTGTTTCTGG ATTCTTAATT CTTGGTTTAC CTGGGAACCTT 240  
 CCTCTTTCTC TCTGTTGTGT AACTTCGGGA TCAAATTCGT CTCGATGGAC CTGTGTTGA 300  
 nCGTTTCTGG GTCCGnAAGT CTGThGAATT GCAG 334

(2) INFORMATION FOR SEQ ID NO: 4375:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 305 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4375:

ATACATGCAA GTCGAGCGAA CGGACGAGAA GCTTGCTThG TGAATGTTAG CGGCGGACGG 60  
 GTGAGTAACA CTGATAACC TACCTATAAG ACTGGGATAA CTTCGGGAAA CCGnAGCTAA 120  
 45 TACCGGATAA TATTTTGAAC CGCATGGThA AAGCTTGCAA AGACGGTCTT GCTGTCACTT 180  
 ATAGATGGAT CCGCGCTGCA TTAGCTAGTT GGTAAGGTAA CGGCTTACCA AGGCAACGAT 240  
 GCATAGCCGA CTGAGAGGG TGATCGGCCA CACTGGAACT GAGACACGGT CCAGACTCCT 300  
 50 ACGGG 305

(2) INFORMATION FOR SEQ ID NO: 4376:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 305 base pairs



(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4376:

GATAAAGTGA AAGAACTCGG ACGTGACACC TATTGCAAGA TTCGTTGGTT TTAAGGCAGT 60  
AGGCGTTGAC CCGAAAATTA TGGGTATTGG GCCTGGCATA TGCGATTCTT GAAGTATTGT 120  
CACTCAGCAA TCTATCTGTT GAAGACATTG ATTTGATCGA ATTGAACGAn CATTGCTCT 180  
CAAAAGATTG CATCTATTAA AGAAGTAGGT CTAGATATAT CACGTACGAA TGTGAATGnT 240  
GGCGCTATTG CTTTAGGTCA TCCATTAGGT GCTACAGGCG CAATGTTAAC CGCGCGTTTA 300  
CTTAA 305

20

(2) INFORMATION FOR SEQ ID NO: 4377:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 324 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4377:

AATGCTTCT ACCCCATCAC AGCTCAGCCT TGAACGAGTA CCGGGTTTGn CCTAATACTC 60  
AGACCTTGAC TGCTTAGACG TGACAATCCA ATACGACACG CTTCGCCTAT CCTACTGCGT 120  
CCCCCATCG ATTAACGCA TTATAGGTGG TACAGGAAAT ATCAACCTGT TATCCATCGC 180  
CTACGCTGT CGGCCTCAGC TTAGGACCG ACTAACCAG AGCGGACGAG CTTTCTCTG 240  
GAAACCTTAG TCAATCGGTG GACGGGATTC TCACCGGTCT TTCGCTACTC ACACCGGCAT 300  
TCTCACTTCT AAGCGCTCCA CATG 324

40

(2) INFORMATION FOR SEQ ID NO: 4378:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4378:

CATCATGCTT AGAAAAGCCT TAATTAGGT TTTGACTTTT TAATCAGAGT ATATAAGCAA 60  
AATTATCAT ACAGGTAAGG TGTAAATAGT ATTTTATT AATTGAGAAT AATTATCAAT 120

55

TGGCACCAAA CTTTAATAIT TTTTCAATG TCATTCTTTT GATGGGAGTG GGACAGAAAT 240  
 GATATTTTCG CAAAATTTAT TTGTCGTCC CACCCCACT TGCATTGTCT GTAGAAATTG 300  
 5 GGAATCCCA ATTCTCTCTT GGTGGGGGCC CATCCCACC TTGCACATA TGGnAGCnGG 360  
 ACCTTTCCGC CGTCCGGGG TGGGGGCCTC nACCCCACT 400

10 (2) INFORMATION FOR SEQ ID NO: 4379:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 345 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4379:

20 ATAAAAATA TCATTGAAA AATTTTCATGT AGAAAAGATG ATGGATAGGC TATAAAGTAA 60  
 TTGTGACTGA GATGAACCTT TATGCTTAG ACATAACAAC ACTATATTGG CAGTAGTTGA 120  
 25 CTGCGGGGCC CCAACATAGA GCAAATTGGA TTCCCAATT CTACAGACAA TGCAAGTTGG 180  
 GGTGGGCCCC AACATGAAAG AAATACTTTT TCTTTAGAAA TTAGTATTTT TTATGCATGA 240  
 GTGTACTCAT GTTGCGATTA TTTTnAGTA CACATTAGCT GTGGACTAAT GATAAAGGnn 300  
 30 TCGCTACATA ATCCATCCAT TAGGTCGTTT CTGATTCAT TCCCT 345

(2) INFORMATION FOR SEQ ID NO: 4380:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 363 base pairs  
 35 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4380:

CTAAAGCTGn CATATGCGGC TTGCCGATGA AGCCAACCTT GCTGCTGTTG GTACAAAATT 60  
 45 GTGCTTTCA ATTTCTGCA ACCAATCGAT GCCAGCTCTA TTTCTGACAA TATCCATATA 120  
 TTTTGAAATT TTCTCTAATT CTTTGCCACT AACCTTTTCA CCAATCAACC AAAATGATC 180  
 CTGTGTTAAC TGGTCGTAA AAGTGACTTT CGTTTCAGTG TAAATTTTTT CTAATGTAAC 240  
 50 AGATATGCTA TTATTCATGG AAGATTAGTG CTCATCTTT TTTACCCCAA TATTTTATAA 300  
 GTGCAATATC GTAGTGCAGG CTGCCCATT TAACACGCAT AACTCCTAAA TCTCAACAG 360  
 ATn 363

55

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4381:

ACCTGAATGA CTCAAACTTG ACTTnOGAC AATTGACTGT nCATTTTGCA TAGTTGTATG 60  
 nCTCCATTnC GTAATTATTA GATTGTGTCG CTACGTCTA TTGAATCATA CAGCTTTATT 120  
 ATAGTTAGCG TATTTCACCC TTTGCACATT AAACCATGTT TAATAATCAT TGAATCATT 180  
 TTAAGTAAAT TAAGGAATCT ATAATGTTTCG TTAATAAAAA CTGATCCCGT TGTGGCTTCA 240  
 CACCGATAG ATAGGGATTTC ACAGATAAAT TCAGGTCTCT TCCAGTCCTA TATTGGGAC 300  
 CCATCGAAAA TCGGGTCTCT AAATCATCGA ACATAACAAA AGAAGCTAAG CAACAGTAGG 360  
 GCCGTTGTCA CTAACTTCT GTTTTCCGA TGACAGCTTC 400

## (2) INFORMATION FOR SEQ ID NO: 4382:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 304 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4382:

GnACTACAAA GCAATGGGT TTGCCAGTTT CTTTATTAC TGACGAATAC TGGCAATGAC 60  
 ATCAGATACA TGTGGCnCA CCAATCCATT TCTTTTCACC ATTGATAACC CAAGTATCGC 120  
 CTGGGTTGC AGGGACTGTT TCAAGACCTC CCGCAAGTC CGAACCGTGT TCTGGTTCAG 180  
 TTAAGCAAA GCATGTTACG CnTTCATGTG AACTGTAATT TAGGTACATA TTTCGCAATT 240  
 TGTCTTTGC TACCTCCGAA ATAGAAAGTG TTATGCCCTA AACCTTGGTG AACCCGAGT 300  
 AGGG 304

## (2) INFORMATION FOR SEQ ID NO: 4383:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 308 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

GTGCATTATT TTGGAGAATT AGCTCAGCTG GGAGAGCATC TGCCTTACAA GCAGAGGGTC 60  
 GCGGGTTTCCA ACCCGTCATT CTCACCATT TTGATTATTA AATTATATGA ATAAGCTGGA 120  
 5 GGGGTAGCGA ATGGCTAAAC GCGGCGGACT GTAAATCCGC TCCTTCGGGT TCGGCAGTTC 180  
 GAATCTGCC CCCTCCACCA TCTATATATT GGGCTATAnC CAAGCGGTAA GGCAACGGAC 240  
 10 TTTGACTCCG TCACCTCGTTG GTTCGAATCC AnCTAGCCCA GCCATTAGAG nCATTAACTC 300  
 AGTTGGTA 308

(2) INFORMATION FOR SEQ ID NO: 4384:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 309 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4384:

AAITTTTGGCC AAAACACCCA TCCGCTGTAA CTTCAGAGTG TCATTGGCAT TTATTACACT 60  
 25 ATCTCCAAC CCTAGTGAA CAACCACATC TCGTCCTTGG GGTGCATGGA ATGTTCCGTC 120  
 AGCCCTGTGA ATTATTTCTT GAACTCCACC ACCTGGGGCG TTTCAGAAC CTCTATCATT 180  
 30 TAATACAGCA AATGTCGGTT GCGTTAATGC TCCTGAATTA TCGGkAGCTA CACCCTTTCC 240  
 TGCTAAAGTA CCACTAGACA ATGTAGGTAT TGGCTTGATG AGATTTtTAT CAGTAATGGC 300  
 TTTAGAnAT 309

35 (2) INFORMATION FOR SEQ ID NO: 4385:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 308 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4385:

AAAGGTGAAA AGCACCCEGG AAGGnAGGTG AAATAGAAC TGAAACCCTG TGCTTACAAG 60  
 TAGTCAGAGC CCGTTAATGG GTGATGGCGT GCCTTTTGTA GAATGAACCG GCGAGTTACG 120  
 50 ATTTGATGCA AGGTTAAGCA GTAAATGTGG AGCCGTAGCA nAACAGGTCT GAATAGGGCG 180  
 TTTAGTATT GTCTGATGCC GAnAACcAGG TGATCTACCC TTGGTCAGGT TGAATTCAGT 240  
 AACACTGAAT GGAGGACCGA ACCGACTTAC GTTGAAnAGT GAGCGGATGA ACTGAAGGTA 300

55

## (2) INFORMATION FOR SEQ ID NO: 4386:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4386:

TAGAATCTTC ATCAATATGA TCTAACCAAT ATTGATAAAA CCTTGATGTG TTTCGTGTCA	60
ATGACATACC ATATCGACTA GGTACCTTTT TAGAATGTTG ATTAATCAnG GCAAATATCA	120
TGGCAAGGTC ATCTTCAAAA TGATTCGATT CAAGTGGAAG GCATATGACG TCTCATCACT	180
ATACCCCTTTT TCCCATCTCG CAAATCCACC ATAAATACTA CGCGACGCGG AACCCGGACC	240
CATTCCGGGC AATCTGGGTh AATCCTTATC TGGACAGCTG GCATGTCTAG CGGCTGGATT	300
TACAAGCTGG CTGGCTAAAG CTGGCATATG CGCTTGCGGG TTGAAGCCCA ACCTGGCTGG	360
CTGGTGGGGn ACAAAATGGT CGCTTTTCAA TTCTnGGCAT	400

## (2) INFORMATION FOR SEQ ID NO: 4387:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 310 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4387:

TCAATTTATG GGGCATTATG ACTTTATATA CCTAAAATAC TAITAAGAAG TCCTGAAAAA	60
TTACACATTAG CAGTTGGATT GTTCAACTTT ATTAATGATA AGTATGCAAA TAATTTCCACA	120
GTGTTTGCG CAGGGGCAAT TATGATTGCA GTACCTATAG CAATCGTATT CTGTCTCTTG	180
CAACGCTATT TAGTATCAGG TTTAACAACA GGTGCGACAA AAGGTTAGTT TGAAATTCnC	240
GnGTGGGGCA GAATTGATAA AGAACCACnA ATGACGATAA AGATTAAAAG CAGGACGTTA	300
TGGATGACGA	310

## (2) INFORMATION FOR SEQ ID NO: 4388:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 310 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4388:

	AACATCATGC TGATGTTGTT GAATATGAAG AAGATACAAA CCCAGGTGGT GGTGAGTTA	60
5	CTACTGAGTC TAACCTAGTT GAATTTGACG AGATTCTACA AAAGGTATTG TAACTGGTGC	120
	TGTTAGCGAT nCATACAACA ATTGAAGATA CGAAAGAATA TACGACTGAA GTAATCTGAT	180
10	TGAAC TAGTA GATGAAC TAC CTGAGGAACA TGGTCAAGCG CAAGGACCCA TTCGAGGAAA	240
	TTACTGGA AAA ACATCATCAT ATTTCTCATC nGGTTTAGGn ACTGAAATGG TCACGGTAAT	300
	TTGGCGTGG	310

(2) INFORMATION FOR SEQ ID NO: 4389:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 302 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4389:

25	TTTACCATAT CATCCACTAT TTATTAAACC TAATAAGAT GAATTAGAAG TGATGTTTAA	60
	TACAACAGTG AACTCAGACA CAGATGTTAT TAAATATGGT CGTTTGTAG TTGATAAAGG	120
30	TGCGCAATCT GTTATTGCT CGCTTGGChG TGGATGGTGC TAITTATATT GATAAnGAAA	180
	TCAGATTAA AGCAGTTAAT CCACAAGGGA AAGTGGTTAA TACAGTTGGC TCTGGTGATA	240
	GTACAGTTGC AGGCATGGTG GCTGGGAATT GCTTCAGGTT TAACGnTTGA AAAGGCATTC	300
35	CA	302

(2) INFORMATION FOR SEQ ID NO: 4390:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 333 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4390:

	AAGAGTGGC TAATAGTCA CTAGTCGAGT GACACTGCGC CGAAATGTA CCGGGGCTAA	60
50	ACATATTACC GAAGCTGTGG ATTTGCTTTT GGCAATGGT AGGAGAGCGT TCTAAGGGCG	120
	TTGAAGCATG ATCGTAAGGA CATGTGGAGC GCTTAGAAGT GAGAATGCCG GTGTGAGTAG	180
	CGAAAGACGG GTGAGATCC CGTCCACCGA TTGACTAAGG TTTCCAGAGG AAGGCTCGTC	240

TnCTTACCA CCTATAATCG nTTAATCGTG GGG

333

(2) INFORMATION FOR SEQ ID NO: 4391:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 306 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4391:

AGTGCCTTTG	TGCACAACT	TGACTGnAAC	TTAGTGCCAT	TGCAGCACCA	GCAACCCATG	60
GCGCAATAAG	CCCAATGCAG	CTATAGGGAT	ACCGnCAATA	TTATAGCCGA	ATGCCCAAAA	120
TAGATTTTGA	CGAATATTAC	GAATGCTTGC	TTACTTGCA	TAAATGGCTT	TAGGAATAAG	180
CATCAAGTCG	CCACCAAGAA	TAGTAATATC	AGCTGCTTCA	ATGGCAACTT	CTGTACCTGT	240
ACCAATGGCG	ATACCGATAT	CAGCTTTAAC	TAATGCAGGT	GCATCATTTA	CACCGTCACC	300
AAACCAT						306

(2) INFORMATION FOR SEQ ID NO: 4392:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 355 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4392:

TACGGTATGC	ATATCTTTTA	AAACCTATTC	TTTTGTTAIT	AGGACATATA	AATTCATCAT	60
TAAGTTCGTC	ATATTTCCAA	TTTTAAGTGT	TGAAAAATGTC	ACTTTTAAAC	TTTCTAGTTT	120
TATCTTTAAT	AAACATGCCA	TACGTAATAA	GTGGCGTTTT	ATTAAAAATCA	TCTATAATAG	180
CCATATAGTT	TTGCTCACTA	CCATAACCTG	CATCAGCTAC	AATATACTCC	GGTAAATAAC	240
CGAAGGATT	TTGAATCATT	GTAAAAAATG	GAATTAAAGT	TCTAGTATCT	GTGGGGTTTT	300
GAATAGGGTC	ATGGGATAAA	CCAAATGnGG	AATTTGCCnC	AATTnGTAAA	TGGAA	355

(2) INFORMATION FOR SEQ ID NO: 4393:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 364 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4393:

5 CATTTCOGTAA TAAATTTACG TGGTTACAAA TTATTTTCAGG TTCTTCTTT GCATTTCGGT 60  
 CTTTAACATA TCTTATTTCG GCACAACCTA ATATGAATGG TTTAGCAACT GGATTATTTC 120  
 TTTCTCAAAAC ATCCGTTGTG CTTGCTACAT TAACGTGTAT TTATTTCTTA AAACAACATA 180  
 10 AAACGTCAAA AGAAATGGTT ATTACAATCA TCGGCTTAGT ACTCATTTTA GTAGCCGCTT 240  
 CTGTTACAGT ATTTATAAAA TAAGGAGTGT AGATGTCATG AAAAAATCAG CGGTTTAAAT 300  
 GGAACCTATT CCAAAGCCAT CGCGACCAAT GGGTCATTG GATTAnTAAC GATAATGGCG 360  
 15 nnGG 364

## (2) INFORMATION FOR SEQ ID NO: 4394:

## (1) SEQUENCE CHARACTERISTICS:

20 (A) LENGTH: 315 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4394:

25 GATTAAAACG ATTATAGGTG GTACAGGAAT ATCAACCTGT TATCCATCGC CTACGCCTGT 60  
 CGGCCTCAGC TTAGGACCCG ACTAACCAGC GAnCGGACGA GCCTTCCTCT GGAACCTTA 120  
 30 GTCAATCGGT GGACGGGATT CTCACCCGTC TTTCGCTACT CACACCGGCA TTCTCACTTC 180  
 TAAGCGCTCC ACATGTCCTT ACGATCATGC TTCAACGCCC TTAGAACGCT CTCCTAnCAT 240  
 35 TGTGCCAAAG GACATGCCAC AGCTTCGGTG AATATGTTTA GCCCCGGTAC ATTTTCGGGG 300  
 CATGmCACT CGACT 315

## (2) INFORMATION FOR SEQ ID NO: 4395:

## (1) SEQUENCE CHARACTERISTICS:

40 (A) LENGTH: 322 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4395:

50 AGCCCCCAAA TGGGTATTGA AATTGAATGG TGGGnCTGA AnTGGACTCG AACCCAGAC 60  
 CTACAGCTTA TCAGCGGTGC GCTCTAACCA GCTGAGCTAT AGGCCATTAT ATTTGAATGA 120  
 ACAAAATTC AAAACTGAAT ACAATATGTC ACGTTATTC GCATCTTCTG AAGAAGATGT 180



TACGACTTCA CCCCAATCAT TTGTCCACC TTGACGGCT AGCTCTAAA AGGTACTCC 300  
 ACCGGCTTCG GGTGTTACAA AC 322

5 (2) INFORMATION FOR SEQ ID NO: 4396:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 303 base pairs  
 (B) TYPE: nucleic acid  
 10 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4396:

15 TCGGCTCTCG CTTACTCATT TAGCTCTACT AAACCTGTTG CGCTCTTTTC TCGTTTGTGTC 60  
 AGATTCAAAC GTTTTCACCT CGCCAAGCCA TTTTCTTTTG TGTTTACTTT TTATTTTGAC 120  
 20 GTTTTAGACA TAAAAAAGA nACCTCAGG TCCAACTTG CTGGCAAGC TTCTACTCTA 180  
 GCGGAAnTGA ATTGGCTACC ATGnCGCTA AAGACCTTTC TTGACTTTTG ACAATCGCTT 240  
 GCTTCTTTC TCTCCTTCG CTCTCGCTTA CTCATTTAGC TCTACTAAAC TCGTTGCGCT 300  
 25 CTT 303

(2) INFORMATION FOR SEQ ID NO: 4397:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 377 base pairs  
 30 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4397:

35 TAAGAATATA AATGATTTTG AAGCAITTTG AAGCTACAA CATTCTATA AAATTTTCA 60  
 40 ATACAATTG CGCCACTAAA ACTCAAAATT TCCACCACCA ACATCCAAAT TATCAACATC 120  
 GCAACATAAC CAAATGTTAT AATAAATCTA TTACACAAAG AGATAAATTA CTATGCAAA 180  
 GCGGAGGAA TCACATGTCT ATTACTGAAA AACACGTCA GCAACAAGCT GAATTACATA 240  
 45 AAAAAATTATG GTCGATTGCG AATGATTTAA GAGGACATG GATGCGAGTG AATTCGGTAA 300  
 TTACATTTTA GGCTTGATTT TCCTATCGCh TCCTTATCTG GAAAAAnCG ACCAGGATnT 360  
 GCAGATGCCT GGCCAGG 377

50 (2) INFORMATION FOR SEQ ID NO: 4398:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 313 base pairs

55

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4398:

TGCAATAACA GTATCTATGC CTACTTGTTT TGCAATGGCT TGAGCAGTGT TTTTATTATC 60  
GCCAGTTAAC ATGGGCAACT TCAATGCCCA TATCATGGCA ATTGTTTTAT AGCATCTTTG 120  
GGCATGAThT TTGACAGTAT CTGCCACTGC GATGATACCA GTTAATGAAT AATTACAGC 180  
AATGAGCATA nCAGTTTTAC CATCTCGTTC ATAATGTGTT AAATCATCAG AAATATGCTT 240  
AAGCAACTAA TATCATTGTC AACCAITAAT TTACCGTTAC CAACCAATAT ATGGTGATGA 300  
TChATCCTTC CTC 313

(2) INFORMATION FOR SEQ ID NO: 4399:

20

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 400 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4399:

TGGCTATGAT CATCCAAAAT ATGSGAATC AATTGCTGCA GCCATTATAC TTGCGGAAGA 60  
TGAACCTCAT TACGCTGAAA TTTTAAATCA ACATATGCGA AGTCGTTTAG CAGGTATATA 120  
AGTCCCAAGA ATGTAATGAC CAGTGACACA TATGCCGTTA AACAGTACGC AGAAACCAGA 180  
TAAACTTGCG ATTGACAAA TGATGAATGA CAAAGTCTCG CAAACACTT AAAGGTGATA 240  
AAAATTTTTG ACATTTAGTG TAAGCGTTTA CAAATAAAGC GTGTTGTTTT TGAATTAAAT 300  
GCATTTCACA TTAGTATTCA TATTAThTTT AGGAGGAATT TATATGACAT TTGAAAAAGA 360  
ACGGGCTTAA AACATTATTCT CTGAGATGTA CTAGTATGCT 400

(2) INFORMATION FOR SEQ ID NO: 4400:

45

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 409 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

50

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4400:

CTCATTTAGC TCTACTAAAC TCGTTCGCT CTTTCTCGT TTGTCAGAT TCAAACGTTT 60

55

AAAAGAGACC TCgtCTCAAC TTGCTTGGA ACGTCTACT CTAGCGGAAC GTAAGTTGGC 180  
 TACCATCGTC GCTAAAGACC TTTCTTGACT TGTGACAATC GCTTGCTTCT TTCCTCTCCT 240  
 5 TCGGCTCTCG CTTACTCATT TAGCTCTACT AAACCTGTTG CGCTCTTTTC TCGTTTCGTC 300  
 AATTCAAAC GtTTTCAcTT CGGCCAAGGC ATTTTTCITT GTGTTACTT TTTAATTTGG 360  
 10 ACGGTTTTAG GCATAAAAAA AAAGGGGACC CTGCGGGCTC nAAAGSGGG 409

(2) INFORMATION FOR SEQ ID NO: 4401:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 311 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4401:

TCATGTAGAC TTTCAAGAAAT CGACACATGA AAATTCAAAA CATCATGCTG ATGTTGTTGA 60  
 ATATGAAGAA GATACAAACC CAGGTGGTGG TCAGGTTACT ACTGAGTCTA ACCTAGTTGA 120  
 25 ATTTGACGAA GATTCTACAA AAGGTATTGT AACTGGTGCT GTTAGCGATC ATACAACAAT 180  
 TGAAGATACG AAAGAATATA CGACTGACAT nnATCTGATT GAAC TAGTAG ATGA ACTACC 240  
 TGAAGAACA TGGTCCAAGC GCAAGGnCCA ATCCGAGGAA ATTGACTGGA AAACAATCCA 300  
 30 TCCATATTTTC C 311

(2) INFORMATION FOR SEQ ID NO: 4402:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 330 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4402:

TTAACGGAAT ATTGGCAAT TCGGTAGTT GTCGAACAAT TGCTAGTTGG TGATGAGTTT 60  
 45 AAGTCAGTCG CTAAGATTG TGAAGTAGA TCGGAAATTT GGTTTAAGCA AACTGTTGCA 120  
 TCATGGTGTT ACTACAGTGA TATGCCTAGC GATGTATTAC TACAACATGG ACGTCAATGT 180  
 AAATTrCAAA CGTTTATTCA TTTTGCGAGC AACTATGGAA TAAAAATGTA TTTAAAAATT 240  
 50 TATGGCTAAT TGCTGGGGA AATGACATAC GAATCTCAGG TTAACAACAGA AAATTAAGC 300  
 AGGTCCATGT nAAGTGTGGG CGGnCGCAT 330

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 340 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4403:

TGnTCACACA	TAATTGCGG	CCATATGTTG	TTGGCACTGG	CCGTTTGTAT	TATCTGGCAC	60
TTTGGGCCCA	TATGTTGnCA	AAATACGCGC	CAATTGCTTC	TTTATAAGTT	GTTATTTTTT	120
TACTTTTTCC	ATCGATAAGC	CATACCTCTG	GATGATACAT	ATGATGCCCC	ATCGCAGACC	180
AATAGCGAAA	TTACCCCGTT	AAAGTTTCGA	GCTCTGATAA	TTGTATAGAC	CATTGATGAT	240
TTTGAGTGG	TACTGTATAT	AAATTTTCTT	CTCTAAAATA	TTCAITTTAA	ATGCGTTCGA	300
TAGCCGCATA	CCTGCCATG	TTGTATTAAAT	CnTTAATTG			340

(2) INFORMATION FOR SEQ ID NO: 4404:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 307 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4404:

TTAACATATA	TTTTGGGACC	TTAGCTGGTG	GTCGCGGCTG	TTCCCTnnA	CGAACACGGA	60
CCTTATCACC	CATGTTCTGA	CTCCCAAGTT	AAATTAATTG	GCATTGCGAG	TTTGTCGAA	120
TTGCGTAACC	CGAGAGGGGC	CCCTCGTGCC	AAACAGTGCT	CTACCTCCAA	TAATCATCAC	180
TTGAGGCTAG	CCTGAAAGC	TATTTGCGGA	GAGAACCAGC	TGATTTCAG	GTTTCGATTGG	240
AAATTTCTCCG	CTACCTTCAG	TTTATCCGCT	CACCTTTCCA	ACGtnAATCG	GTTCCGGTGC	300
TGCCATT						307

(2) INFORMATION FOR SEQ ID NO: 4405:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 323 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4405:

AnACTTTGAGT GCAGAAGAGG AAGTGGAAAT TCCATGTGTA GCGGTGAAAT GGCAGAGAT 120  
 ATGGAGGAAC ACCAGTGGGC GAAGGCGACT TTCTGGTCTG TAACTGACGC TGATGTGCGA 180  
 5 AACGTGnGGG ATCAACAGG ATTAGATACC CTGGTAGTCC ACGCCGTAAA CGATGAGTGC 240  
 TAAGTGTTAG GGGGTTTCCG CCCCTTGAGT GCTGnCAGCT AAACGCATTA AGCACTCCGC 300  
 CTGGGGGAGT GACGGACCCG AAG 323  
 10

(2) INFORMATION FOR SEQ ID NO: 4406:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 315 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4406:

AATTATGGGA TGCAATGGGA TACGAACGTG TTAACACACG TATGGAAGAC GAACTTGGAG 60  
 ACTTACCACA ATGGATTAGT GATTTAGATG GTGGCTTTTA TAAACAAGAT GAGACCATTG 120  
 25 AATATGCAAC ACCTATTCTC CACTTCGTAA AAGATGAACT TTGGGATAAA GGTGATGCCA 180  
 AACTTTCCGT AACTCATGAT GATCAACTGT TACTGAAATT ACAAAGTAAA AATAATGTCA 240  
 TTACCGATGA ATTCAACGGT GCGTTAGTTG ATGCGATTGA TTTACTGGGA AATGACCCTT 300  
 30 ACnCnAGnAT GGGTA 315

(2) INFORMATION FOR SEQ ID NO: 4407:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 333 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4407:

CACCACCTCC CTACCTACTC GCCCCCCATC ATAAAAATAGG TGGACAGGAA TATCAACCTG 60  
 45 TTATCCATCG CCTACCTCTG CGCCTCAGCT TAGGACCCGA CTAACCCAGA GCGGACGAGC 120  
 CTTCCTCTGG AAACCTTAnT CAATCGGTGG ACGGGATTCT CACCCGTCTT TCGTACTCA 180  
 CACCGGCATT CTCACTTCTA AGCGCTCCAC ATGCTCTTAC GATCATGCTT CAACGCCCTT 240  
 50 AGAAGCGTCT CCTACCATTT TCCAAAGGAA TcncACAGCT TCGGTAATAT GTTTAGCCCC 300  
 GGTACATTTT CGGCGCATGT CACTCGACTA nTG 333

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 393 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4408:

ATTTAATGAA GTGCTTGTTA ATGAACCAAG CGCTAAAGAT ACTGTTGAAA TTTTAAAGG 60  
 TATTCGCGAA AAATTCGAAG AACACCATCA AGTAAATTA CCAGATGACG TATTAAAGC 120  
 ATGTGTGAC TTATCAATTC AATATATTCC ACAACGATTA TTACCAGATA AAGCAATCGA 180  
 TGTGTTAGAT ATTACAGCAG CACATTATC TCGCGAAAGT CCCAGCTGTC GATAAAGGTT 240  
 GAAACTGAAA AACGGATTTC TGGATTtGA AAATGATAAA CGTAAAGCAG TAAGTGCTTG 300  
 AAGGGATTTT AAAAAAGCTG ACGGACCATT CAAAATTTGG AATCCAAATC nntTACCAGG 360  
 TTAAATTTGG GAAAATGGTT AATTGGTGGG ACC 393

(2) INFORMATION FOR SEQ ID NO: 4409:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 319 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4409:

GACTTGTGAC AATCGCTTGC TTCTTTCCTC TCCTTCGGCT CTGCTTACT CATTAGCTC 60  
 TACTAAACTC GTTGCCTCTT TTTCTCGTTT CGTCAGATTC AAACGTTTTT ACTTCGCCAA 120  
 GCCATTTTTC TTGTGTtTA CTTTTTATT TTACGTTTGA GGCATAAAAA AAAGAGACCT 180  
 TCGCGTCTCA ATCGGGCTCA TCGCATCCAT TTTTGCCTG GCAACGTTCT ACTCTAGCGG 240  
 AAGTnAATTG GGCTACCATC GTCGCTAAAG ACCTTtCTTG ACTTGTGGAC AATCGCTTGG 300  
 ChTCTnTCTT CTCCTTCGG 319

(2) INFORMATION FOR SEQ ID NO: 4410:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 325 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

AATTAACAT TTCAITTTAA TCAATGAGAC TAATATACGC CTAACCTCGT TAACITTTAA 60  
 AATGTATTAA AAITCTAAAG TTCTTTTGC TTTTChATG ATGTCATTTT TGTGTGGTAA 120  
 5 CCAACATT TCAGCTTGAG TGAATGATA AATGTATCT GCCTGCCTGA ACTCTTCCAA 180  
 TAGGTGCTTC TAATGAAAGG ATGCACGTC ACTTAATCA GCTAACAACT GCTGCACCAA 240  
 CACGAGCTTG ChGTTGTGCT TCTTGACTAC AAAGTACGA CCACTTTTTC AACTGAGCAC 300  
 10 AATTGTGCAC ATCGATTGGT GACAG 325

(2) INFORMATION FOR SEQ ID NO: 4411:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4411:

GAGTTGGACA ATGCCGAAGC GTGAGCAAAG TTTTACCAT GCATGGTTGC ATTTAGCGCA 60  
 25 ACATGACCAT AGTTTACTA AAGCACAGCG CCAAGTGATT AAAGGCTTAC CCAATGATCC 120  
 TGAAATGACG ATAGAGTCAG TATTAATCA TTTTCAATA GATCAGGAAG ACTAnCAAGC 180  
 TTATGTGAA GGACATCTTT TGGCGTTACC GGGTThGGCA nGTATGTTGT ATTACCGTTT 240  
 30 ACCGAGCAT CACTTTGAAC CACCTTTGTT AACGGGTAA TTGGCCATTC GGGTAAGTTG 300  
 TCCGACCATT GCCAAGTGG TGATGAGTTh AGGCCAGTCC GCAAAAGATT GGGAAAGTAG 360  
 TCCGAAAAT GGGTTAAGCC AACCTGTTGC CATCCAGGGG 400

35

(2) INFORMATION FOR SEQ ID NO: 4412:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 369 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4412:

GATATATGCG AGCTCAAAGG AATGGGTTTC AGTTGAAGTG AAATTATCAC AGTCACTAGA 60  
 CCCGAGCACA TTATTTTCATC TCACTGACAA TGAGGCAGGA GATCGCTTT ATATGCGTTT 120  
 50 GAATGATAAT CGAACGTCAT ATTTTGGCTA CAAAGCAATT CAATTATICA AAAATAATT 180  
 TAAAAATAAA CAATCTATTT TAAAAGACTG GGGAAATTA AACATAACCA TCACCATTTA 240

55

CCATAAATCA GATGATGAAT GGCGnGAGTT TGGCTAAAn CATTGGAAT ACCCGAGTT 360  
TIAATTCCA 369

5 (2) INFORMATION FOR SEQ ID NO: 4413:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 315 base pairs  
(B) TYPE: nucleic acid  
10 (C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4413:

15 TACCATCTCT GCTAAGAACC TTCTTGACT TGTGACAATC GCTTGCTTCT TTCCTCTCCT 60  
TGGGCTCTCG CTTACTCATT TAGCTCTACT AAACCTGGTG CGCTCTTTTC TCGTTTCGTC 120  
20 AGATTCAAAC GTTTTCACTT CGCCAAGCCA TTTTCTTTTG TGTTTACTTT TTATTTTGAC 180  
GTTTITAGACA TAAAAAAGA GACCTCACGG TCTCAACTTG CTGGCAAGC TTCTACTCTA 240  
GCGGAAGTAA GTGGGCTACC ATCGTCGCTA AAGACCTTTC TTGGACTTGT GGACAAnCGC 300  
25 TTGCGTCCTT nCCTC 315

(2) INFORMATION FOR SEQ ID NO: 4414:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 309 base pairs  
30 (B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4414:

GACCATCTCC TAAGGCTAAA TACTCTCTAG TGACCGATAG TGAACCACTA CCGTAGGAA 60  
AGGTGAAAAG CACCCCGGAA GGAGGTGAAA TAGAACCTGC AAACCGTGTG CTTACAAGTA 120  
40 GTCAGAGCCC GTTAATGGGT GATGGCGTGC CTTTGTGATA ATGAACCGGC GAGTTACGAT 180  
TTGATGCAAG GTTAAGCAGT AAATGTGGAG CCGTAGCAGA ACAGGGTCTG GAATAGGGCG 240  
45 TTTAGTATTT GGTCGTAnCC GAAAACCAGG TGATCTACCC TTGGTCCAGT TGAAGTTCAG 300  
GTTnACACT 309

(2) INFORMATION FOR SEQ ID NO: 4415:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 300 base pairs  
50 (B) TYPE: nucleic acid  
(C) STRANDEDNESS: double

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## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4415:

5 TTTATTATAC TTACATTTTC TCGTTTCGTC AGATTCAAAC GTTTTCACCTT CGCCAAGCCA 60  
 TCTTTCCTTG TGTTTGCTTT TATTTTGACG TTTTAGACAT AAAAAAGAG ACCTTGCGGT 120  
 10 CTCAAATGCG GCTCATCGCA TCCACTTTTT GCCTGGCAAC GTTCTACTCT AGCGGAATTA 180  
 AGTTCGGACT ACCATCGACG CTAAGGAGCT TAACCTCTGT GTTCGGCATG GGAACAGGTG 240  
 TGACCTCCTT GGTATATGTC ACCAGNACAT ATGAATGTGA AATTTATACA TTCAAAACTh 300

## (2) INFORMATION FOR SEQ ID NO: 4416:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 286 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4416:

25 AGAAAAATAA GCGAACTGNa ATAAATAAAG ATTCAATTAA CGCATCAGTA TTAGGATTCA 60  
 CTCTAAAGCG ATTAATAGTT TTATAAGAAG GTGTTTGATC TTGAGCTAAC CACATCATTC 120  
 30 GAATACTGTC ATGAAGTAAT TTCTCTATTC TACGACCAGA AAATACAGAT TGAGTATATG 180  
 CATATAAGAT GATTTTAAAC ATCATCTTTG GATGATAGGA TGTTGCGCCA CGATGATGTG 240  
 TGAATTCATC GAATTTGCTA TCAGGTATCG TTCAACAAT TTCATT 286

## (2) INFORMATION FOR SEQ ID NO: 4417:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4417:

45 TTTGATAAAA ATGGGCCATC GTCACGAGCT TCAACAATTC GTTTCGCAAC GTTTTCGCCA 60  
 AGCCCAGCCT GATATATTAC ATGAGGAGCG GTGCAATGT TGTTAGAAAT TAAAGATTTA 120  
 GTGTATAAAG CGAGCGATAG AATCATACTA GATCATATCA GTCTAAAAGT AGATAAAGGC 180  
 50 GAGAGTATTG CCATTATAGG TCCATCAGGT AGTGGTAAAA GTACATTICA AAAGCAAATA 240  
 TGTAATTTGT TTAGTCCAAC TAGTGGAGAA CTTTATTTTA AAGGTAAACC CTATAATGAT 300

GTTTGGTGGG ACGnATTGGA nGATAACCAT GGATAATTCC

400

(2) INFORMATION FOR SEQ ID NO: 4418:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 286 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4418:

GTATTTACAA CAAACTAAG CAAAGTATT CAGATGCCTC AGATAAAGCT TGGGCGCATT 60  
 CAAATCTAT TTGGAGAGGC ACATCAAAAT GGTTTAGCAA CGCATATAAA AGTGCAAAGG 120  
 GTTGGCTAAT AGATATGGCT AATAAATCGC GCTCGAAATG GGATAATATT TCTAGTACAG 180  
 CATGGTCGAA TCGAAAATCC GTTTGGnAAA GGAnCATCGA AATGGTTTAG TAACTCATAC 240  
 AAATCTTTAA AAGGTGGAC TGGGGATATG TATTCAGAG CCCACG 286

(2) INFORMATION FOR SEQ ID NO: 4419:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 300 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4419:

CTCACTTCTA AGCGCTCCAC ATGTCCTTAC GATCATGCTT CAACGCCCTT AGAACGCTCT 60  
 CCTACCATTT TCCAAAGGnA TGCnCACAGC TTCGGTAATA TGTTTAGCCC CGGTACATTT 120  
 TCGGCGCATG TCACTCGACT AGTGAGCTAT TACGCACTCT TTAATGATG GCTGCTTCTA 180  
 AGCCAACATC CTAGTTGTCT GGGCAACGCC ACATCCTTnT CCACCTTAACA TATATTTTGG 240  
 GACCTTAGCT GGGTGGTCTG GGCTGTTTCC CTTTCGAACA CGGACCTTGA TCACCCCATG 300

(2) INFORMATION FOR SEQ ID NO: 4420:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 336 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4420:

GGTGAGCGGA GCGAACTCnG GTTAAGGAAC TCGGCAAAAT GACCCCGTAA CTTCGGGAGA 120  
 AGGGGTGCTC TTTAGGTTAA CGCCCAAG AGCCGAGTG AATAGGCCCA AGCGACTGTT 180  
 5 TATCAAAAAC ACAGGTCTCT GCTAAACCGT AAGTGATGTA TAGGGGCTGA CGCCTGCCCG 240  
 GTGCTGGAAG GTTAAGAGGA GTGGTTAGCT TCTGCGAAcT ACGAATCGAA GCCCCAGTAA 300  
 10 ACGGcGGCCG TAACATAAC GGTCTAGACG ATCTGC 336

(2) INFORMATION FOR SEQ ID NO: 4421:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 297 base pairs  
 15 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4421:

GGnCACCCCTC GTGCCAAACA GTGCTCTACC TCcATAATC ATCACTTGAG GCTAGCCCTA 60  
 AAGCTATTTC GGAGAGAACC AGCTATCTCC AGGTTGATT GGAATTTCTC CGCTACCCCTC 120  
 25 AGTTCATCCG CTCACTTTTC AACGTAATCG GTTCGGTCTT CCATTCAGTG TTACCTGAAC 180  
 TTCAACCTGA CCAAGGTAGA TCACCTGGTT TCGGTCTAC GACAAATACT AAACGCCCTA 240  
 30 TTCAGACTCG CTTTCGCTAC GGCTCCACAT TTA CTGCTTA ACCTGCATC AAATCGT 297

(2) INFORMATION FOR SEQ ID NO: 4422:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 35 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4422:

GTACATGTC TAATAATAAG TTGACGATAT CTTGCAATGC ATCTTTATCT AAATGTAAGA 60  
 45 ATTCAACGAT GCCGTGAAG CGGTTAAGGA ATTCAGGGCG GAAGAATTTT TTCATTTCGT 120  
 GCATAATATC TTTTCTTCA GCGTCATTGC CATTGCCAAA GCCAGCATTG GATGTACAAA 180  
 TAATAATTGT ATTTTAAAG TTGATGACAT TACCTTGACC ATCAGTCAAA TTACCATCAT 240  
 50 CCATTACTTG TAATAACAAT GTTAAAAATTG TGGATTGCTT TTCGATTCA CAATAGAATG 300  
 ACTGAGANGG GATACGGCGA CTTTTCAGTA AACGGATTGA ATGGCATCAT AnCCACATAC 360  
 55 CAGCGTGGAC CATCATTTTG GAACAGCGTG GGCACATATC 400

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 291 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4423:

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AAGTTGAGTC GCATAGCTAG TATGAAACGT GGTGTGCGCA TGGGAACATAT CAAGCTTTGA      60
AGATGTGGTA CTACATGCGT TGAATTAGGG ATCGGTACTT TATATGAAGA CGTGCTGCTT      120
CCATTAAATG AGTGATGCGA TTTTGGCATG AAGGTCACCT TAAATGTACA TTGTTGTAAT      180
AAAATTGCCT ATAAATTTT AGCACATAAA ATAAGAnGnG CCAACCATTG TTAGACTATA      240
ACAACGGTTG GCTCTTTAAT TGTA AAAAAG AACCATACG CTATGGTAGT T      291

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(2) INFORMATION FOR SEQ ID NO: 4424:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4424:

```

AATGCCACC ACCTGGGGnC GTTCCAGAA CTCCTATGCA TTCAATCAC AGnCAAAATGT      60
GCGGTTGACG TTCAATGACT ACCTGCAATT CATCGGTCAG CTCACACCCT TTACCTGnCT      120
AAAGTACCAG TAGACAATGT AGGTATTGGA CTTCGATGAG CATTTTTATn CAGTAATGGS      180
CTTTAGATAT TTTATTAAAT CCGGCCAATC ATGCTATTCA AACCGCCAAT AGCTTTATTA      240
GCAACATTTT TACCTAAATC AGCCGCAGCT CTTCCCATGT CTTTACCAAT ATCTCTAATC      300
CAATCATATG TTTTTCGATA GCCATTTTCT AAAACCATT AATACTGATT TAGCGTTAGA      360
CCATGCCGAA CTGAAATTG CATCAAAAGC ATCGTGGGCT      400

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(2) INFORMATION FOR SEQ ID NO: 4425:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 340 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4425:

AGATGATAAA AGCAACAGGT GGTTTTGGCA AAAGTGAAGT ATGGCGTCAA ATGATGTCAG 120  
 ATATATTTGA CACAGAGTTA GTGGTTCCTG AAAGTTATGA AAGTTCATGC TTAGGTGCCT 180  
 5 GCGTGCTCGG ACTTAAAGCT GTAGGTGACA TTGAAGATT TTCAATCGTT TCATCGATGG 240  
 TCGGTGCCAC AAACAATCAT ACGCCGATTG AAGAAAATGC ACTGTTACCA AGATCGAAT 300  
 10 CCATTHTAT CATTAAAGCGT CTATnCAGAG ATATGACAAT 340

(2) INFORMATION FOR SEQ ID NO: 4426:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 292 base pairs  
 15 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4426:

CTGAAGATGA TAAAGATGCA GATGGTGGCG AGTTGCACGT AACAAATTACG GATCATGATG 60  
 ATTTCACTACT TGATAACGGA TACTTCGAGG AATTATCATC AGACAGCGAT TCAGACTCAG 120  
 25 ATAGTGACTC AGACAGCGAC TCAGACTCAG ACAGCGACTC AGACTCAGAC AGTGATTCAG 180  
 ATTCAGACAG CGACTCAGAT TCAGATAGCG ACTCAGATTG GGACAGCGAT TCAGACTCAG 240  
 30 ATAGCGACTC AGATTCAGAT AGCGATTGAG ACTCAGACAG CGACTCAGAT TC 292

(2) INFORMATION FOR SEQ ID NO: 4427:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 307 base pairs  
 35 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4427:

AACAGTGCTC TACCTCCAAAT AATCATCACT TGAGGCTAGC CCTAAAGCTA TTTCGGAGAG 60  
 AACCAGCTAT TTCCAGGTTT GATTGGAATT TCTCCGCTAC CCTCAGTTCA TCCGCTCACT 120  
 45 TTTCACGTA ATCGGTTGGG TCCTCCATTC AGTGTTACCT GAACCTCAAC CTGACCAGGG 180  
 TAGATCACCT GGTTTCGGGT CTACGACAAA TACTAAACGG CCCTATTCAG ACTCGGCTTT 240  
 50 CGCTACGGTT CCCACATTTA CTGGCTAAAC CTTCATCAA AATCGGTAAC TCGnCGGGTC 300  
 ATTTCTAn 307

(2) INFORMATION FOR SEQ ID NO: 4428:

55

(A) LENGTH: 354 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4428:

10	GACCATACAT CGTCATCGTT TGCACCGTCA AATACTGGTG ATGCAACGTG AATACCAAGA	60
	TTTTTAGCAG CCATACCTAA GTGTAGCTCT AATACTTGTC CGATGTTTCA ACGAGATGGT	120
	ACACCAAGAG GATTTAACAT GGATATCGAT CGGACGCTCC ATCTGGTGAA GTGAAGGCAT	180
15	ATCTTCTTCA GGGAAACAAT TTGAGGAAAT GGACACCTTT GTTGACCATG TCGGACCACA	240
	CATGCTTATG CACCAACATG GAATTTTACG TTTTGGAAAT GATGATTATT ACACGTrACT	300
	AATTGGTTTA CACCAGGTGG AaAATGTTAT CGTCGGCCTT GCTTCACGAT TGGA	354

20

(2) INFORMATION FOR SEQ ID NO: 4429:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4429:

30	GTGnACTATC nGCTTGTCTA TGATAATATT ATTCTTTGTA CTTGTTTAAA AGATATTAGA	60
	CTAAAACTAA AAACAGCAGT AAGATGATT ATGATTAAAA CTATCTTACT GCTGTTCACT	120
35	TTTTATAATA CTTCTGAATG TCTCACTTAT ACTTCTAGTC ACAGATTTAA ATAATCAAAA	180
	GTGCACATTA TAAAAATATC AATTTCACAC TCAATCGGCG TCATCGCATT CATTCTTGT	240
	CTAGCAACGT TCTACTCTAG CGGAACGTAA GTAGCTACCA TCTCGCTAAG GAACCTTCTT	300
40	GACCTGGTGA CAACCGCTGC GnCtTnTCTCT CTTGGCTCT CGCTTACTCC ATTTAGCTCC	360
	ACTAAACTCG TGCGGCCCTT CCGGTTCCGC AGATCCAACG	400

45

(2) INFORMATION FOR SEQ ID NO: 4430:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 292 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4430:

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ACCATTGACA CTTGACAGC CACATAACAT AACTAAGTTT AAGATnGGG GATAAATCGT 120  
 ATCTGAGTTA AACCAATGGT TAATACCCGC ACCCATGATA ATCATTGAAC GCCCTTCAGT 180  
 ATCGATAGCG TTTTGCGCAA ATTCTTTTCG TACTTGAATG ACAACACTTT GTTTTACGCC 240  
 TGAATGGCT TCTTGCCAAG CAGGTGTATA TTTTGATTCT GCATCGTCGT AA 292

(2) INFORMATION FOR SEQ ID NO: 4431:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 284 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4431:

TGAGCCGnAC ATCGAGGTGC CAAACCTCCC CGTTCGATGT GAACTCTGG GGGAGATAAG 60  
 CCTGTATATCC CGGGGTAGC TTTTATCCGT TGAGCGATGG CCCTTCCATG CGGAACCACC 120  
 GGATCACTAA GTCCGTCTTT CGACCTGCT CGACTTGTAG GTCTCGCATC AAGCTCCCTT 180  
 ATGCCCTTAC ACTCTATGAA TGATTTCGAA CCATTCTGAG GGAACCTTGA GCGCCTCCGT 240  
 TACCTTTTAG GAGGCGACCG CCCAGTCAAA CTGCCCGCCT GACA 284

(2) INFORMATION FOR SEQ ID NO: 4432:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 312 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4432:

TATCATGTGT GTACGATAAG GCATATGTTG TACCTATGnA TGGTGGAAGA GCCTTCAGTT 60  
 GTCGCTGCAG CTAGTTATGG TGCAAAGCTA GTGAATCAGA CTGGCGGATT TAAACGGTA 120  
 TCTTCTGAAC GTATTATGAT AGGTCAAATC GTCTTTGATG GCGTTGACGn TACTGGAAAA 180  
 TTATCAGCAG ACATTAAAGC TTTAGAAAAG CAAATTCATA AAATTGCGGn TGAGGCATAT 240  
 CCTTCTATTA AGCGCGTGTG GTGGTTACCA CGTATAGCGA TTGATACATT CCTGGCCACC 300  
 AGTTCTATCT TT 312

(2) INFORMATION FOR SEQ ID NO: 4433:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 288 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4433:

CGGTACTCGT TAAGGCTGAG CTGTGATGGG GAGAAGACAT TGAGTCTTCG AGTCGTTGAT 60  
10 TTCACACTGC CGAGAAAAGC CTCTAGATAG AAAATAGGTG CCCGTACCGC AAACCGACAC 120  
AGGTAGTCAA GATGAGAATT CTAAGGTGAG CGAGCGAACT CTCGTTAAAG AACTCGGCAA 180  
AATGACCCCG TAACTTCGGG AAAAAAGGTT CTCTTTAAGG TTAACGCCCA GAAGAGCCGC 240  
15 AGTGATAAG CCCAAGCGAC TGTTTTATCC AAAACACAGG TCTCTGCT 288

(2) INFORMATION FOR SEQ ID NO: 4434:

(i) SEQUENCE CHARACTERISTICS:  
20 (A) LENGTH: 336 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4434:

GGACCGAACC GACTTACGTT GAAAAGTGAG CGGATGAAC T GAGGGTAGCG GAGAAATTC 60  
30 AATCGAACCT GGAGATAGCT GGTCTCTCh AAAATAGCTT TAGGGCTAGC CTCAGTGAT 120  
GATTATTGGA GGTAGAGCAC TGTTGGACG AGGGGCCCTC CTCGGGTTAC CAATTCAGA 180  
CAAACTCCGA ATGCCAATTA AATTAACTT GGGAAATCAG AACATGGGTG ATAAAGTCG 240  
35 TGTTTCGAAA GGAACAGACC CAGACCACCA GCCAAGTCCC AAAATATATG TTTAATGGGA 300  
AAAGGTGTGG CCTTGGCCCA GGACAACCAA GAAGTT 336

(2) INFORMATION FOR SEQ ID NO: 4435:

(i) SEQUENCE CHARACTERISTICS:  
40 (A) LENGTH: 304 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
45 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4435:

ATTGACCGCG CATTTTTACG GAATGGGAAT AAAGCGACAC AAACCGTCAC GTCnGTGTTG 60  
50 GTGTGATGAC AAGGTAATGC GAGTGATCTG ATGTATGGCT TATCATGGCA ATCTGTTATG 120  
GnCTGACTGA TCGGACGATG TATCATTCCG CAATTCGTTT ACTTGTCGTT ATTCAGGCAC 180

55



AATCATTGGC TGCCTTTTAA TGAGCGTAAT GAGGAAGGGC CGTTTAAAAA GTTGGATTTA 300  
ACGA 304

(2) INFORMATION FOR SEQ ID NO: 4436:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 305 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4436:

AATATACTCC GGTAAATAAC CGAAGAGTTT TGAATCATTG TTA AAAAATGG AATTAAAGTT 60  
CTAGTATCTG TTGGGTTTTG AAATAGGTCA TAGGATAAAA CAAATnGAGA ATTGTGCGCT 120  
ATTTGTAAAT TGTATCTCTG CTTAAGTTGG CCATTTTTC TATGGTCTTC CTTCATTCTC 180  
ATAAAAGTTG CATCATGGAT CAGTTTTAGA AAAGCTATTT CTATCTTTAA GAATCGATTT 240  
TTGTTCTTCA TATTTATTTT TTCTTTGGGA ATAATCATCA AATTTATnTT TGGAACTTCT 300  
TAATC 305

(2) INFORMATION FOR SEQ ID NO: 4437:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 359 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4437:

ATCGTTTAAA TCAGTTAGTA AAAAGTCTGT GAGTAAGGGT GTATOGAAAG TGGTTAAATA 60  
TTATAGAAAA CATCAAAGGA TGTTAAGAAA TACAATTTAT TACCCAGCAT TTAATAATGG 120  
TGCTATAGAA GGAATTAATA ATAAGATAAA ATTAATCAAG TGAATTTCTT TTGGTTACAG 180  
AAATTTCAAC AACTTTAAAG CACGTATAAT GATGATTTTC AGCTTGTACA AGGGGGAnAA 240  
AAGGAnGnCA ACCAAGCCCA ATAATGGACT GGCCGCCATA TATTA AAAAC TCTAAAGGTT 300  
GTATTTTAAA ATAGTTCTTT AAATTATATA CCCACCACAT TTGGTGGAGA CCCGTTAAC 359

(2) INFORMATION FOR SEQ ID NO: 4438:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 286 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4438:

ACTTACAGTT ATTTAACTT GGNcAGAATC CATCATCCAT AAGTTCGAAA TGTTGTAAAA 60  
 5 CATAAACCTT GnaAACGGCA ACATTTTGG GTCCCTCTCC ATCATTTTAT TTTAAAGCGC 120  
 ATTATGATCA ATATCATGCC CAATTAACCT TCCAGCAATT TCCATAGTAT GTTCTGAGGT 180  
 10 ATTGTTAAAA AGGAATCGCC CAGTATCACC GACGATACCA AGATATAAAA CGCTCGCGAT 240  
 ATCTTTATTA ACAATTGCTT CATCATIAAA ATGTGAGATT AAATCG 286

(2) INFORMATION FOR SEQ ID NO: 4439:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 394 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4439:

TCGCTTGACT TCTTTCCTCT CCTTCGGCTC TCGCTTACTC ATTTAnCTCT ACTAAACTCG 60  
 25 TTGCGCTCTT TTCTCGTTTC GTCAGATTCA AACGTTTCA CTTCGCCAAG CCATTTTCT 120  
 TTGTGTTTAC TTTTATTTT GACGTTTtag ACATAAAAAA AAGAGACCTT GCGGTCTCAA 180  
 30 TCGGGCTCAT CGCATCCATT TTTTGCCTGG CAACGTTCTA CTCTAGCGGA ACGTAAGTTG 240  
 GCTACCATCG ACGCTAAGAA CCTTCTTGA CTTGTGACAA aTCGCTTGCT TCTTTCCTCh 300  
 TCTTCGCTCT CGCTTACTCA TTTAGCTCTA CTAACCTCGT TCGCTCTTTT TCTCGTTTCG 360  
 35 TCAGATTCAA CAGTTTTCAT TCGCCAAGCC ATTT 394

(2) INFORMATION FOR SEQ ID NO: 4440:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 295 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4440:

TAATAGGTTc GAGGTGGAAG CATGGTGACA TTGGCAGCTG ACGAATACTA ATCGATCGAA 60  
 45 GACTTAATCA AAATAAATGT TTTGCGACAA TGCAACTTTT ACTTACTATC TAGTTTTGAA 120  
 50 TGTATAAATT ACATTCATAT GTCTGGTGAC TATAGCAAGG AGGTCACACC TGTTCcCATG 180

TAGAACGTTG CCAGGCAAAA AATGGATGCG ATGACCGCAT TGAGACCGCA GCnTn 295

(2) INFORMATION FOR SEQ ID NO: 4441:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 345 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4441:

TTTCATAAAA AGATTTCAAA CGCGTTCATC AAnCCTCGTC GCAGGTCTTT CGAACACTAG 60  
 CGATTATTTT tTATGAATTC AAGCTTATTT AAAACTCTTT ATTCaCTCGG TTTTGCTTGG 120  
 TAAATCTAT ATTTTACTTA CTTATCTAGT TTTCAATGTA CAATTTCTTT TTAGTCAAGC 180  
 GCTCGCATAC TGCTTTATTT TCATAAGCAA TATCATTTTA ACCAAAAAAT ATTTGAATGT 240  
 TAAATAAACA TTCAAAACGT AATACAATAT GTCACGTTAT TCCgCATCTT CTGAAGAAGA 300  
 TGTTCCGAAT ATATCCTTAG AAGGAGGTG ATCnGCCGn ACCTT 345

(2) INFORMATION FOR SEQ ID NO: 4442:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 313 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4442:

AATCATTGTC AAAACTACGT TCTGGTAAAC AAGGACAACC CGTTTGAACC ATTGCCCCAC 60  
 ACCATTGTAG AGGCAGnCAT GTGCGCAATG GACATCCACA TAGTTGCGTA ATGTTTCATA 120  
 CGTCATTGCT CAAATCATTG ATGACTAGCG CAACATGATT ACCTTGTCGT GnGCACCTTC 180  
 ATTAAAGnAA CTTATGATAG ATTTATTTCG CGGGACATTA AGCATTGCA TCGTTAACAT 240  
 GCGTATTGCA CCCAATTAG AAGTTCCTCC GTGCCGTTTG GTATATCACA AATTTGTAGT 300  
 GTATCTTGGA TGC 313

(2) INFORMATION FOR SEQ ID NO: 4443:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 336 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4443:

AGCATGSGT TTCTCAGATT GTCGGATGTA TAAATGTGA TGTATGTTT TAATTTTTC 60  
 5 CAGTCTTTAA AAATAGATTG TTTATTTTGA GAATTATTT TGAATAATTG AATTGCTTGT 120  
 TAGCCAAAAT ATGACGTTGC ATTATCATTG AAACGCATAT AAAGCGTATC TnCTGCCTCA 180  
 10 TTGTCASTGA GATGAAATAA TGTGCTCGGG GTCTAGTGAC TGTGGATAAT TTCCTTCAA 240  
 CTGAAACCCC ATTCCTCTTG AGCTGCCCAT ATATCTCTTT GGACAATATC GGTCCCTCTA 300  
 ATACGShCCG TAGnCCATTG CATTTCATTT CTTTTC 336

(2) INFORMATION FOR SEQ ID NO: 4444:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 20 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4444:

CAGACTGGGA TATTATATAA ACGTTGGCAA AAGCATTTTC AGAAATGGCA AAAGACTATT 60  
 25 TACCTGGAAC GTTTAAAGAT GTTGTGACAA CTCCACTTAG TCATGATACA AAGCAAGAAA 120  
 TTTCAACACC ATACGGCGTA GTGAAAGATT GGTGGAAGGG TGAATTTGAA GCGGTACCTG 180  
 30 GACGTACAAT GCCTAACTTT GCAATTGTAG AACGCGACTA CACTAAAATT TACGACAAAT 240  
 ATGTCAGCTG TGGCCTGTGA CTGAAAAAA GGGGAAATTT GGAGCACCTG GGGGTAAAGT 300  
 35 TCCGTGTCCA GTTGAACCAT TATGGAGGAn TThAAAAAGT ATGTTAAGGG ACCTGGGAGT 360  
 TGAATACCCA ATGGATnGAT TCCCGTGAAG AGCCGAATCC 400

(2) INFORMATION FOR SEQ ID NO: 4445:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 339 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 45 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4445:

TACGCCACG ACGGATAGGG ACCGAACTGT CTCACGAGT TCTGAACCCA GCTCGCGTAC 60  
 50 CGCTTGTAAT GGGCGAACAG CnATCGCCTT GGGACCGACT ACAGCCCCAG GATCGATGA 120  
 GCCGACATCG AGGTGCCAAA CCTCCCCGTC GATGTGAAT CTGGGGGAG ATAAGCCTGT 180

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CACTAAGTCC GTGCTTTGGA CCCTGACTAC GGACTTGThA GGTCTGCGGC ATTCAAGCTT 300  
 CCCTTGATGG CCTTTGACAC TGCTTATGGA ATGnATTGG 339

5 (2) INFORMATION FOR SEQ ID NO: 4446:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 318 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4446:

15 CAATTTTAAG TGTGAAAAT GTCACTTTAA AACTTTCTAG TTTTATCTTT AATAAACATG 60  
 CCATnCGTAA TAAGTGGCGT TTTATATAAA TCATCTATAA TAGCCATATA GTTTGTCTA 120  
 20 CTACCATAAC CTGCATCAGC TACAATATAC TCCGGTAAAT AACCGAAGGA ThTTTGAAT 180  
 CATTGTGTA AATGGAATTG AAAGTTCTAG TATCTGTGG GTTTTGAAT AGGTCATAGG 240  
 AATAAACAGG GTGAGAAATT GTCGCTATT GTAAATTGTA TCCTGGCTTA AGTTGGCCAT 300  
 25 TTTTnCATAG GTCTTCCT 318

(2) INFORMATION FOR SEQ ID NO: 4447:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 279 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4447:

35 TTTTGAAATT CTCTATGTT GGGCCCGGAC TATAATTGAA AAATGCTTGT TACAAGTGCA 60  
 40 TTTTATTCTA GTCAACTACT AACAAATATA CATTGTGGAG CCCAGAnCTT TGATTAAATG 120  
 ATATGAAAAT CAAAGTAATG CTTATGTATG ATTATTTCAA ATATTTTACA TACATGAAT 180  
 TTTCCAATGT ACGATACTAT TATTATAAAG CGCTCGCTAA GATTTTACGA TGATTAGAGG 240  
 45 GTAAAAAATG AAGGATCAAT GGTnTAACCA TTTAATTGG 279

(2) INFORMATION FOR SEQ ID NO: 4448:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 302 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4448:

GACACCGCGA TCTCAGCTT CTAAGCGCTC CACATGCTCT TACGATCATG CTTCAACGCC 60  
 5 CTTAGAACGC TCTCTACCA TTGTCCAAAG GACAATCCAC AGCTTCGGTA ATATGTTTAG 120  
 CCCCCTGACA TTTTCGGCGC AGTGCTACTC GACTAGTGAG CTATTACGCA CTCTTTAAAT 180  
 GATGGCTGCT TCTAAGCCAA CATCCTAGTT GTCTGGGGCA ACGnCACATC CTTTTCACCT 240  
 10 TAACATATAT TTTGGGACCT TTAGCTGGTG GTCTnGGGCT GTTTTCTGnA TTGAACACGG 300  
 GA 302

## (2) INFORMATION FOR SEQ ID NO: 4449:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 359 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4449:

CGTTGGTATA TAGAGGGCAA CCGTCACCTG ATAAAAATGTG GACACAGTTT TTACAAGAGG 60  
 25 TTAAGGAAAT GAGTTGGAG GCATACGAGC ATCAAGAATA CCCATTGAA TGTTTAGTAA 120  
 ATGACTTAGA TCAATCACAT GATGCCTCAC GGAATCCATT ATTTGATGTC ATGTTAGTAC 180  
 30 TACAAAACAA TGAACGAAA TCATGCTCAT TTTGGGCATA GTAAATTTAA CACACATTCA 240  
 ACCCCAAATC AGTGACGGGC GGAATTTGG ATTTnCTCT TTCCATCATT GGAAGAAGGA 300  
 TCGCGGATGA CCTAATnCA ATCCAATTAT CGGGGTATAA ATACCGGATT TTATAACCA 359

## (2) INFORMATION FOR SEQ ID NO: 4450:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 326 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4450:

GATGACAAAA TITGCTTGAA AACCGAAATG GATGGTCATC ATTGACTGnA TCAAGGTACA 60  
 45 TCATCTTTTG GTGCTTAGC ATTTAGACAT TATACAAAA CAATACTTTT ATAGGGCAAC 120  
 50 CTTATGGGGT TCTATCGGCT ATACATTACC TGCAACATTA GGTTCACAAT TAGCAGACAA 180  
 AGATCGTCGn TAACTTATTA TTAATTGGTG ATGGCTCATT GCCAACTAAC TGTTCAAGCT 240

GCTATACGGT AGAACGACTT ATCCCC

326

(2) INFORMATION FOR SEQ ID NO: 4451:

- 5 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 381 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4451:

15 GAAACATCA AAGGATGTTA AGAATACAA TTTATTACCC AGCATTTAAT AATGGTGCTA 60  
 TAGAAGGAAT TAATAATAAG ATAAATTAA TCAAGTGAAT TTCTTTGGT TACAGAAATT 120  
 TCAACAACIT TAAAGCACGT ATAATGATGA TTTTCAGCTT GTACAAAGGA GAAAAAAGA 180  
 20 AGACAACCAA GCCCAATAAT GGACTGGCCG CCTAATAATA AAAACTCTAA AAGTTGTATT 240  
 TTAAAAATAG GTCTTTAAAT TATATACCCC CCCCATTTGG GTGGAGAACC GGTAAACCAT 300  
 GCCTAGGTGC CTAACCTCCn ATAATGnAC CCTCTCTTAC CATTTGGGCC ATGGGGCCAA 360  
 25 TAAAGCGGGG GGCAATTGGG G 381

(2) INFORMATION FOR SEQ ID NO: 4452:

- 30 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 276 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4452:

TTAATAACIT AATCTATGIT TCCATCTAC AGGAAACGCG TTATTAATCT TGTAGTGTT 60  
 40 CTTTCGAACA CTAGCGATTA TTTCTTATGA ATTCAAGCTT ATTTAAACT CTTTATTCAC 120  
 TCGGTTTTCG TTGGTAAAT CTATATTTTA CTTACTTATC TAGTTTTCAA TGTACAATTT 180  
 CTTTTTAGTC AAGCGCTCGC ATAAGCAATA TCACTTTAAC CAAAAAATAT TTGAATGTTA 240  
 45 AATAAACATT CAAACTGAA TACAATATGT CACATn 276

(2) INFORMATION FOR SEQ ID NO: 4453:

- 50 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 341 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4453:

GGCGAAACCG CGTAGCGTTT TTAAAGTCTG ATGTGAAAGC CCACGGTCAA CCGGGAGGGT 60  
 5 CATTGGAAC TGGAAACCTT GAGTGCAGAA GAGGAAAGT GAATTCCATG TGTAGCGGTG 120  
 AAATGCGCAG AGATATGGAG GAACACCACT GAGCGAAGCG ACTTCTGGT CTGTAACCTGA 180  
 CGCTGATGTG CGAAACGTGG GGGATCAAC AGGATTAGAT ACCCTGGTGA GTCCACGCCG 240  
 10 TAAACGATGA nTGCTAAATG TTAGGGGGTT TCGCCCCCTT AGTGGGTGCC AGCTAnACGC 300  
 ATTGAAGCAC TGGCGCTGG GGAGTGACGA CCGCAAnTTG A 341

## (2) INFORMATION FOR SEQ ID NO: 4454:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 281 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4454:

AcnCTCCCCA AGTCATATC GTCGTTAGTA ACGTCCTTCA TCGGCTTCTA GTGnCCAAGG 60  
 CATCCACCGT GGGCCCTTAA TAACTTAATC TATGTTTCCA CCATTTTAT AAGTCAAACG 120  
 CTCACATACG GCTTCGTTTT CATTATTTTA AATGCTCATT TACATAAGTA AACTCTGCTT 180  
 30 TAAAAATAAT TAACTCAITG TCTGCTAAAC GTTTTCTTTT ATAAAAAGAT TTAACGCGT 240  
 TATTAATCTT GTGAGTGITC TTTCGAACAC TAGCGATTAT G 281

## (2) INFORMATION FOR SEQ ID NO: 4455:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 279 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4455:

ATGTCTTCAC TTACTTCTT AGTCACAGAT TTAATAATC AAAAGTGAC ATTATTAATA 60  
 TATCAATTC ACACCTAATG GGGCTCATCG CATTCAATTC TTGTCTAGCA ACGTCTACT 120  
 50 CTAGCGGAAC GTAAGTTAGC TACCATCCTC GCTAAGAACC TTTCTTGACT TGTGACAACT 180  
 GCTTGCTCTT TTCTCTCTCT TCGGCTCTCG CTTACTCATT TAGCTCTACT AAACCTGTTG 240  
 CGCTCTTTTC TCGTTTCGTC AGATTCAAAC GTTTTCnGT 279



- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 275 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4456:

ATTTTGACGT TTTAGGCATA AAAAAAGAG ACCTTGCGGT CTCATGCGG CTCATCGCAT 60  
 CCATTTTTTG CTGGCAACG TTCTACTCTA GCGGAACGTA AGTTGGCTAC CATCGTCGCT 120  
 AAAGACCTTT CTTGACTTGT GACAATCGCT TGTCTCTTC CTCTCCTCG GCTCTCGCTT 180  
 ACTCAATTAG CTCTACTAAA CTCGTTGCGC TCTTTCTCG TnTCGTCAGA TTCAAACGTT 240  
 nTCACCTCGC CAAGCCATT TTCTGTGTT TACTT 275

## (2) INFORMATION FOR SEQ ID NO: 4457:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4457:

ATCCGATTCA CAAAGCACAT CATCATATAC AAGTCAGTCA ACAAGCCAAA GTGAATCCAC 60  
 ATCGACATCA ACGTCACTAA GCGATTCAAC AAGTATATCT AAAAGTACGA GTCAATCAGG 120  
 TTCGTAAGC ACATCAGCGT CATTAAAGTGG TTCAGAGAGT GAATCTGATT CACAAAGTAT 180  
 CTCACAAGT GCAAGTGAAT CAACATCAGA AAGTGCCTCA ACATCACTCA GTGACTCAAC 240  
 AAGTACAAGT AACTCAGGAT CAGCAAGTAC GTCAACATCG CTCAGTAACT CAGCAAGCGC 300  
 AnTGGAATCC GATTGTGCTT CAACATCTTT AAGTGGATTG AACATCTGCG TChATGCCAA 360  
 AGnnGTGAAT CCGATTACCA AAGCACATCA GCATCCTTAA 400

## (2) INFORMATION FOR SEQ ID NO: 4458:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 351 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4458:

AGTCGCTGTC TGAATCTGAA TCACTGTCTG AATCGGAATC GCTATCTGAT TCTGAGTCGC 120  
 TATCTGAACC TGAGTCGCTG TCTGAGCCTG AGTCACTGTC TGAATCCGAA TCCGGATCCG 180  
 5 GGTCTGGGGn TGGTTCCGGT TCTGGGTCTG GGACTTGGTT CTGGATCTGG CGTTGGTTCT 240  
 GGGTCTGGGG TCTGGACTGG TTCTGGGGTC AAACGGCGGC CCTGGAGTGG GGTCTTTCGG 300  
 10 AATnAACGGC GGAATCACCA TCAAGCAACT TnCAACAACC ATAACGAAAA A 351

(2) INFORMATION FOR SEQ ID NO: 4459:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 271 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4459:

ATCCTGCAGT TGATCAGTAT GGTGATATTA ATTTAGTTAA TACGAACGCG TCATCTACAA 60  
 GTGAAATCAT TTACGATTTA ATCTCACATT TTAATGATGA AGCAATTGTT AATAAAGATA 120  
 25 TCGCGAGCGT TTTATATCTT GGTATCGTCG GTGATACTGG GCGATTTCCT TTTACAATA 180  
 CCTCAGAACA TACTATGGAA ATTGCTGGAA AGTTAATTGG GCATGATATT GATCATAATG 240  
 30 CGCTTTTAAA TAAAAATGAT GAGAAGGnCC C 271

(2) INFORMATION FOR SEQ ID NO: 4460:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 283 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4460:

ACTGTGGATT AATATTATGC CTGGCAACGT TCTACTCTAG CGGAACGTAA GTTCGACTAC 60  
 CATCGACGCT AAGGAGCTTA ACTTCTGTGT TCGGCATGGG AACAGGTGTG ACCTCCTTGC 120  
 45 TATAGTCACC AGACATATGA ATGTAATTTA TACATTCAAA ACTAGATAGT AAGTAAAAGT 180  
 GATTTTGCTT CGCAnAACAT TTATTTTGAT TAAGTCCTCG ATCGATTAGT ATTCGTCAGC 240  
 50 GCCACATGTC ACCATGCTTC CACCTCGAAC CTATnAACCT CAG 283

(2) INFORMATION FOR SEQ ID NO: 4461:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 274 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4461:

CTTCTACAAG TCCTGAATAT ACTTATGAAT CTCTTCTTTC GTGTATGCAA ACTGACGTTG 60  
10 TAATTTAAAT AACGTCTCAT CTTTCCATTG CGAATCTTGA TATTGTATAT TTTCAAAATC 120  
AAAGTCAACT TTATGGTTAT CAATCCACGC TTTATATGGT AATTCTCCAG CAATCGCACC 180  
TTTTAAATCA TTATTTTCAA TGACTTTATT CTGTAAAAAT CAACAACAT AACTTTCcG 240  
15 GATTCAATTG ACCTTTAAAA GCAACATTAC TTCC 274

(2) INFORMATION FOR SEQ ID NO: 4462:

(i) SEQUENCE CHARACTERISTICS:  
20 (A) LENGTH: 271 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4462:

GGGTGCTAAA AATCTTGGTA TTCACGTTGC ATCACCAGTA TTTGACGGTG CAAACGATGA 60  
30 CGATGTATGG TCAACAATTG AAGAAGCTGG TATGGCTOGT GATGGTAAAA CTGTACTTTA 120  
TGATGGACGT ACAGGTGAAC CATTGATAA CGTATTTC A GTAGGTGTAA TGTACATGTT 180  
GAAACTTGCG CACATGGTTG ATGATAAATT ACATGOGCGT TCAACAGGAC CATATTCACT 240  
35 TgTACACAA CAACCACTTG GCGGTnAAGC G 271

(2) INFORMATION FOR SEQ ID NO: 4463:

(i) SEQUENCE CHARACTERISTICS:  
40 (A) LENGTH: 300 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4463:

GCGGCTCATC GCATTCAATT CTGTCTAGC AACGTTCTAC TCTAGGGAA CGTAATTAGC 60  
50 TACCATCCTC GCTAAGAACC TTTCTTGACT TGTGACAATC GCTTGCTTCT TTCTCTCCT 120  
TCGGCTCTCG CTTACTCATT TAGCTCTACT AAACGCTTG CGCTCTTTC TCGTTTCGTC 180  
AGATTCAAAC GTTTTCACCT CGCCAAGCCA TTTTCTTTG TGTTACTTT TTAATTGAC 240

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## (2) INFORMATION FOR SEQ ID NO: 4464:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 361 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4464:

TACCGAATCG AAGCCCCAGT AAACGGCGGC CGTAACATA ACGGTCCTAA GGTAGCGAAA 60  
 TTCCTTGTGCG GGTAAGTTCC GACCCGCACG AAAGGCGTAA CGATTGGGC ACTGTCTCAA 120  
 CGAGAGACTC GGTGAAATCA TAGTACCTGT GAAGATGCAG GTTACCCGCG GACAGGACGG 180  
 GAAAGACCCC GTGGGAGCTT TTA CTGGTTA GCCTGGATAT TGGAAATTCG GGCACACTTG 240  
 GTTACAGGAT AGGTAAGGAG CCTTTTGAA ACGTTGAGCG CTACTTTAnG TTGGGAGGCG 300  
 CTGgThGGGA TACTTACCTT AACTGTGTTT GSCTTTTCTn AACCGGCACC ACTTATCCTG 360  
 G 361

## (2) INFORMATION FOR SEQ ID NO: 4465:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 292 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4465:

CTGTATGTAC ACCACCAATC GGTITAGGTT TAGCAACGTT TGTTCAAAAG TATAAATTCA 60  
 ATCATTCCGA AAGAGAAATG GGTAAGGCTT CCTTCACTAT GGGACTATTT GGTATTACTG 120  
 AAGGTGCTAT TCCTTTCGCA GCCCAAGATC CATTGCGCAT TATACGTGCA AACATCATTG 180  
 GTGCAATGAT TGCATCAGTC ATTGCAGCCA TTGGTGGTGT CGGCGATAGA GTCGCACATG 240  
 GnGGTCCCAA TCGTGGCTGT ATTAGTGGG TTTTGT TTTTnTTTT TT 292

## (2) INFORMATION FOR SEQ ID NO: 4466:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 308 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

GCAAACAAA CAGTATTAGT AGATTATGAA AATATGGTA AGTTTATATA CTTATCTATT 60  
 AAAGGTACAA TTGACCAAAAT CGATAAAACA AATAATACGT ATCGTCAGAC AATTTATGTC 120  
 5 AATCCAAGTG GAGATAACCT TATTGCGCGG GTTTTAACAG GTAATTTAAA ACCAAATACG 180  
 GATAGTAATG CATTAAAGAG TCAGCAAAAT ACAAGTATTA AAGTATATAA AAGTAGATAA 240  
 TGCCnCTGAT TTATCTGAAA GTTACTTTGT GGAATCCCGG AAACCTTGAG GGTGGCCCCT 300  
 10 AATAnTGG 308

(2) INFORMATION FOR SEQ ID NO: 4467:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 271 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4467:

AAGCAGGCGC TCTCCAGCT GAGCTAAGCC CCCATAATAA TTACAGTATA TCGGGAAGAC 60  
 25 AGGATTGAA CCTGnGACCC CTGTGTCCTCA AACCAAGTGC TCTACCAAGC TGAGTACTT 120  
 CCCGTATAAT TAAGCGCCCC GATAGGAGTC GAACCCATAA CCTCTTGATC CGTAGTCAAA 180  
 CGCTCTATCC AATTGAGCTA CGGGCGCATA TGTITTTTATT GAAAATAGTG CCGAGGACCG 240  
 30 GAATCGAACC GGTACGTGAT CACTCACCGC A 271

(2) INFORMATION FOR SEQ ID NO: 4468:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 306 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4468:

TGTGTTAGGT ATTACATCAT CACATTTATC TGCCTCAAAG TCCAGCTGTC GATAAAGTTG 60  
 45 TAAACTGTAA AAACGCAATT TCTGAATTAG AAAATGATAA ACGTAAAGCA GTAAGTGCTG 120  
 AAGAnTATAA AAAAGCTGAC GACATTCAAA ATGAAATCAA ATCATTACAA GATAAATTAG 180  
 50 AAAATAGTAA TGGTGAACAT ACTGCTGTTG CTACAGTTCA TGATATTTCA GATACTATTC 240  
 AACGATTAAc TGGTATTCCA GTTTCTCAAA TnGATGATAA CnTATTGAA CGTTTAAAAA 300  
 ATATTT 306

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(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 329 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4469:

GGTTTATTAA CAGCATTCTT ATCAGCATTT GTAACGTGTA TTGTTTATAA CTTCGTGTG 60  
 AAGCGCAATA TTACAATTAA AATGCCGAAA GAAGTACCGC CGAATATTTT ACAAGTATTT 120  
 AAGGACTTAA TTCCATTTTC AGCGGTAATC ATCATTCTTT ATGCATTAGA TTTAGTCATT 180  
 CGCAACAGCT TTAATCAAAA TGTAACGAAA GGTATTITAA AATTATTCGA ACCATTATTT 240  
 ACAGCAGCAG ATGGATGGGT TGGTGTCTAC CATTTAACnT TGGGnGnTnT TGCATTAATC 300  
 CTGGGTTTGT AGGGTAATCC ATGGGTCCG 329

(2) INFORMATION FOR SEQ ID NO: 4470:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4470:

AATGGGTGA TAAGGTCCTG TTCGAAAGGA AACAGCCAG ACCACCACT AAGSTCCCAA 60  
 AATATATGTT AAGTGGA AAA GGATGTGGCG TTGCCAGAC AACTAGGATG TTGCTTAGA 120  
 AGCAGCCATC ATTTAAAGAG TGCCTAATAG CTCCTAGTC GAGTGACACT GCGCCGAAAA 180  
 TGTACCGGG CTAAACATAT TACCGAAGCT GTGGATTGTC CTTGACAAAT GGTAGSAGAG 240  
 CTCTAAGGA CTGAAGCTG ATCGTAAGAC TGTGGAGCGn TAGAATGAGA TGCCGTGTGA 300  
 TAGnAAAGAG GGTGAGATCC CTCACCGTT GACTAAGTTC CAGAGGAAGC TCTCCCTCGG 360  
 GTTATCCGGT CCTAAGnGAG GCCGACAGCT AGGCATGGnT 400

(2) INFORMATION FOR SEQ ID NO: 4471:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 325 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

TCATTTTTAG AAATATTATC TTTTCCACAA ATCATTGAT ATAAAGTGC ATCATTGCG 60  
 GCGAGTGCTG CCATTGACAC TAGCTGTGTC GTATCATTTT TGGCTAGCAC TTCGGGATAC 120  
 5 TTTCTTAGCT GAACAGTTAG ATGACCTAAT TGATCTTTGA AAATATCATT ATCTTGACCC 180  
 ATATATGACC ACCAAGCTGT TTCATCACAA ACCATGACAT ACTTAGCTAG TGCTTCATCT 240  
 TTTTCTATAA GCTGACGTAA TAATTGTCGT CTGTCTCTCC GTTTTnCATG TACGCGGAGG 300  
 10 CGTAAnCTTA AAGGGCCCAA Ggncg 325

(2) INFORMATION FOR SEQ ID NO: 4472:

(i) SEQUENCE CHARACTERISTICS:  
 15 (A) LENGTH: 276 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4472:

CCCGTCTTC GCTACTACA CCGGCATTCT CACTTCTAAG CGCTCCACAT GTCCTTACGA 60  
 25 TCATGCTTCA ACGCCCTTAG AACGCTCTCC TACCAITGTC CAAAGGACAA TCCACAGCTT 120  
 CGGTAATATG TTTAGCCCGG TACATTTTCG GGGGCAGTGT CACTCGACTA GTGAGCTATT 180  
 ACGCACTCTT TAAATGATGG GCTGCTTCTA AGnCAACATC CTAGTTGGTC TGGGGCAACG 240  
 30 CCACATCCTT TTTCCACTTT AACAnATATT TTGGGA 276

(2) INFORMATION FOR SEQ ID NO: 4473:

(i) SEQUENCE CHARACTERISTICS:  
 35 (A) LENGTH: 333 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4473:

AATTnCCAA AAAATTCAAA TGGCTCATTT ACCAAAAGGT AAACCTCCGC CTTTAAnTTT 60  
 45 CTTaATGCAT kGTCTAACAA cCGCTTTCTT TAAAgaAATA GATTGTCAAG CGCTCGCATA 120  
 AGCAATATCA CTTTAACCAA AAAATATTG AATGTAAAT AAACATTCAA AACTGAATAC 180  
 50 AATATGTAC GTTATTCCGC ATCTTCTGAA GAAGATGTC CGAATATATC CTTAGAAAGG 240  
 AGGTGATCCA GCCGCACCTT CCGATACGGC TACCTtGTTA CGACTTCACC CCAATnCAT 300  
 TGTCCCACT TCGACGGGCT AGCTCCGAAA AGG 333

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 325 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4474:

TATAAAATAG CAACGTTATT CCAATTATCT TAATGGTTAT CTTATCCTCA ACTAAATTGG	60
AGGAATCACT ATGACAATTA ATAAAGTAAC CGTCTTGGC GCAGGCACAA TGGCGCCTCA	120
ACTGGCAGCA CTTTTTGTA ATGCTGGACT TAAAGTAAnA CTATTAGATA TTGTAGTGA	180
CAAAAACGAT CCnAATCTCA TTGCGAAAA ATCTTACGGT TAAATTACAG GTAAGAAACG	240
GCCGCTACTA TTCGnCTTAA ATCTAGCGGT CAITTACCAT ATGGTATTTT GATGTGCTTG	300
GTAAATGTGT GCTGTTTGAT ATCGA	325

(2) INFORMATION FOR SEQ ID NO: 4475:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 308 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4475:

TAATGCGGC AACATTGCT TGTTTTGGT ATGGTTGGCA CATTGATGC GGCATTCATA	60
CAATACATCT AGTATTATCT GGTATTTTGT ATCGTTATCC AAAGTTAAAT AATGATTATT	120
GGACATTGGG GTGAGTTTAT CCCATTCTTC TTAGAAACGT ATGGATGAAG CTTATTGCT	180
GACATTThAC CACCCTGTAA GCTATACTTT AAAAATAAAT TTTAATCACA CCGAGTGGCA	240
TGTTAACGAG CCACAGTTTG ATTTAGTCAA GAAGnAGAGG TATTGTAGAn TCTTATGCGC	300
TGATATCC	308

(2) INFORMATION FOR SEQ ID NO: 4476:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 280 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4476:



CCTACCTATC CTGTACAAGC TGTGCCGAAT TnCAATATCA GGCTACAGTA AAGCTCCAGC 120  
 GGGTCTTTCC GTTCCTGTGC CGGGTAACCT GCATCTTCAC AGGTACTATG ATTTCACCGA 180  
 5 GTCTCTCGTT GAGACAGTGC CCAAATCGTT ACGCCTTTGC TCGGGTGGG AACTTACnCG 240  
 ACAAGGAATT TCGCTACCTT TAGGACCGTT ATAGTTACGG 280

10 (2) INFORMATION FOR SEQ ID NO: 4477:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 279 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4477:

20 GCTAAGAACC TTCTTGACT TGTGACAATC GCTTGCTCTC TTCCTCTCCT TCGGCTCTCG 60  
 CTTACTCATT TAGCTCTACT AAACCTCGTT CGCTCTTTTC TCGTTTCGTC AGATTCAAAC 120  
 25 GTTTTCACTT CGCCAAGCCA TTTTCTTTTG TGTTTACTTT TTATTTTGAC GTTTTAGACA 180  
 TAAAAAAGA GACCTCACGG nCTCAACTTG CTTGGCAACG TTCTACTCTA GCGGAACGTA 240  
 ATTGGGCTAC CATCGnCGCT AAAGACCTTT CTTGACTTG 279

30 (2) INFORMATION FOR SEQ ID NO: 4478:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 272 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 35 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4478:

40 GAGGATCCCG GAATGTTGAA CCCATCACTG ATTCTGGTTC ATAATTATCC ATCATCCATA 60  
 ACGTTAAATC TAAAGCGTGT GTACCGATAT CGAATTAATGG TCCTCCACCT TGAGCTTCTT 120  
 45 CGTCTAGAAA GACACCCCAT GTTGGnACTG CTCGACGACG AATGGCATGT GCCTTTCGGA 180  
 AGTAAATGTC TCCTAAGTCG CCACGTTGCG CTGCTTGATG TAAAAATTGA CTATCTGCTC 240  
 GGAACGATT TTGATAACCT ATTGTTAATT TT 272

50 (2) INFORMATION FOR SEQ ID NO: 4479:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 265 base pairs  
 (B) TYPE: nucleic acid  
 55 (C) STRANDEDNESS: double

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4479:

5 GAAATTGGGA ATCCAATTTT nCTTTGTTGG GCGCCATCCC CAACTTGCAC ATTATTGTAA 60  
 GCTGACTTTT CGTcCTTAC TGTGTTGGGG CCTTCACCCC AACTCGATT GCCTGGTAGA 120  
 ATTTCTTTTC GAAATTCTCT GTGTTGGGGC CCTTGACTAG AATTGAAAAA AGCTTGTTC 180  
 10 AAGCGCATTT TCGTTGAGTC AACTACTGCC AATATAACTT CGTAGAGCAT AGAATATTGA 240  
 TTTATGTCCC AGCCTGAGTT AATT 265

## (2) INFORMATION FOR SEQ ID NO: 4480:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 343 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4480:

25 ACATAGAAAT GCCACTTTTA CAAACAAATG AATATTCGTC TTTTACATC ATTACGCATA 60  
 ATAAAAGAAG CTAAGCAACA TGTAAACCGT TGTCACTTAA CTTCCTGTTT TCCGATGAC 120  
 AGCTTCTATT TAGAGAATGT CATGATTATT TTATATTCAC TTCAATGTTA TCAATATTAG 180  
 30 TGCCATCTAT GACGTCTGCC ATACGATGCT CTGGCAGTTT TTTGGTGGTA ATTCAAACGT 240  
 ATATTCACCAC CGTTTTCATT TAATAACGTT GTCCnGGACC CATGTACCGT AAGATATGTT 300  
 TTCATAGTGG TTCAAATTAA ACCAnTCTTC AGGAACCTCn TAG 343

## (2) INFORMATION FOR SEQ ID NO: 4481:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 288 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4481:

45 ACTGCGGCAA TAGCAGCAGC ACCACAAACG GCCTGTGTCC GGACACCTAG GTAATAATGC 60  
 GCATGTTTTT GTCACCATGC CAACAGTTTG TTGACAAAGA GCATCATTAC AATACTGGAA 120  
 50 AATAACGACA CCTACATCGA TGGCTAATAG TTTACTACCT TGACCGATAA TATCGAATAT 180  
 ATTGAGTTTA AGTCCATATA GGATGATTGC AAATCTTAAT AAATATTTAG ATGAAAACGT 240

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## (2) INFORMATION FOR SEQ ID NO: 4482:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 289 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4482:

GAGGCATCCC CGGCCCTTCC TTCCCAACAG TCGCTTCAAA GTTTGGTGGT AAACCTGnTA	60
CATCAAATTA TCGGTGCTAC TGTnAGGTAC GTGTAATCTT CGCTATTTTA TTAGCCGTAT	120
CACATCAAGT GGCTTCCTTA CTGGAACCAA TTTGTATTTC GCCTTATTAT CAGGTGCAGG	180
ATGGGGATTC GGACAAATCA TTACATTAA AGCGTTCGAA TTAGTCGGCT CATCTCGTGG	240
CCATGCCAGT CACAACAGCA TTCCAATTAT TAGGCGCATC TTTATGGGG	289

## (2) INFORMATION FOR SEQ ID NO: 4483:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 264 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4483:

AATCAAAAGT GCACATTATT AAAATATCAA TTTCACTC AATGCGGCTC ATCGCATTCA	60
TTTCTTGTCT AGCAACGCTT TACTCTAGCG GAACGTAAGT TAGCTACCAT CCTCGCTAAG	120
AACCTTTCTT GACTTGTGAC AATCGCTTGC TTCCTTCCTC TCCTTCGGCT CTCGCTTACT	180
CATTAGCTC TACTAAACTC GTTGCCTCT TTTCTCGTTT CGTCAGATTC AAACGTTTnC	240
ACTTCGCCAA GnCATTITTC TTG	264

## (2) INFORMATION FOR SEQ ID NO: 4484:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 261 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4484:

CTGTACCACC TATAATCGTT TTAATCGATT GGGGGACGCA TAGGATAGGC GAnGTGGCGA	60
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TGAGCTGTGA TGGGGAGAAG ACATTGTGTC TTCAGTCGT TGATTTCACA CTGCCGAGAA 180  
 nAAGCCTCTA GATAGAAAAA GGTGCCCGTA CCGCAAACCG ACACAGGTAG TCAAGATGAG 240  
 AATTCTAAGG TGAGCGAGCG A 261

(2) INFORMATION FOR SEQ ID NO: 4485:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 261 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4485:

ATGCAGCTAT TATTTTIGAC AGATTCCTA TCGTTCAACA TTAAATAGA GAACTTAATA 60  
 AGTATCGTGT ACAAGTTATG AATGAATACC GTAATAAAAA AGGACCTGAT TATACAATTT 120  
 TTAAGAATAA CTGGAAAGTC CTATTGATGG ATACTAGTAA AACCATATTT AGTAAATACA 180  
 GATGGANTAA ATCTTTTAAG GCTTATAAAC GTCATCTGA CATTGTAGAN GTCATGCTTT 240  
 CAAAAGACGA TATACTACGA C 261

(2) INFORMATION FOR SEQ ID NO: 4486:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 260 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4486:

AGCAACATGA TGCACCTTCT GTGTCTCACC AGATTTAGCG ACTAAACTTG TAGACATACG 60  
 TAAATCTGCT TTAATAAGTA ATTAATGCAC ATGACTTATT GCGAGTAACA TCGGCATTGC 120  
 AAAGCCATTG CTATCAACTA ATCCACTATC ATCTAACACT AGANTTTGAG CGCCTTGCTT 180  
 TACAGCATTC ACTGCTTCTC GGCCTAATGC TTCTAACGCA TCTTCCAAT CCCCTTCATA 240  
 TACCGTTGAT AAATAAGTTA 260

(2) INFORMATION FOR SEQ ID NO: 4487:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 316 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4487:

5 ATGAGGTGCA TAGGGSATAAA ACAGnnAGCA GCAATTGTGC GCTATTGTGA AATTGTATCC 60  
 TGGCTTAAAGT TGGCCATTTT TCATATGGTC TTCTTCATT CTCATAAAAG TTGCATCATG 120  
 ATCAGTTTTA GAAAAGCTAT TTCTATCTTT AAGAATCGAT TTTTGTCTT CATATTTATT 180  
 10 TTTTCTTTTG GAATAATCAT CAAATTTATT TTTGAACCTC TTAATCTTAG TTCTTTTTTA 240  
 CGGGTCTGTT TTCCAATTG AGTACTATCC TCGTCCCCA ATAGAATGAA TTTAAACCTT 300  
 CCGATTTCCT TTAAnC 316

## 15 (2) INFORMATION FOR SEQ ID NO: 4488:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 307 base pairs  
 (B) TYPE: nucleic acid  
 20 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## 25 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4488:

CACTTTTACT GCTAAAACGT CAATGTGTA TGAGTCGTGT TTTATCTCAA GATGTGTTAC 60  
 TCAAAAAGTT ATAGAAGAAG CTACTAAAGT TAAACAGAG ATTGATACTG CCAGAAGATA 120  
 30 ACTGTATCTC TCCATCTACT GTAAGTCCGT ATTAGAACTA AAGCGGCTAA TTCATTACGA 180  
 ATTAAACCTT TTAATTGTTT GCCAGACACA TCGCTATGGA TGAATTTAAA GCGTnAAAAAT 240  
 GTACTGTGATC ATGAGTTCAT TTTATAGnT ATGTACnCAT GTGTATAGTA TTTAGAAATA 300  
 35 GACTCAA 307

## (2) INFORMATION FOR SEQ ID NO: 4489:

- (i) SEQUENCE CHARACTERISTICS:  
 40 (A) LENGTH: 344 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## 45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4489:

TTGGCAAAATG TCATATAACT AGTAACATGA TCATCGACAT CAAATTTAGT ATGATCAAAT 60  
 50 GTTCCCCAAT CATTAATTTG ATTCGGTTGT TTGCTCAATT GATTATATGT TTTTCTTAGC 120  
 ACTTCATGGG GCACCATATC TTTACCTAGT AGCCCCACAA AGATAAGTCT AACAGTGGC 180  
 55 ACCATAATCG ATAAACTACC GCCACCTGCA CGCTTATGGT AAAACACCCA GCCAGCACTT 240

TAGCAGTATG CCACnCCGn GACGATATGG TAGCGACGTA AnAA

344

(2) INFORMATION FOR SEQ ID NO: 4490:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 313 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4490:

CCCAACCGGC ACATTGTTGT AAGCTGACTA TATGTCACCTT CnTGTGTTGG GGCCCTGTGC 60  
 TTCGACTGGC ACTGCTCCCT CAGGAGTCTC GCCATTAATA CTACGTATTA ACATGTAATT 120  
 TTACTTTTAA ATACTTTTAA AAAATAAGAC ACTTTGGTCC AACTTAAGCC AGGGATACAA 180  
 TTTACAAATA GCGACAAATT CTCAATTTGT nTTATCCTAT GGACCTATTT CAAACCCAA 240  
 CAGGTACTnA GTAACCTTGA ATTCCATTTT TTAACAATGG ATTGCAAAAT GACCTTACGG 300  
 TTCATTTGAC CGG 313

(2) INFORMATION FOR SEQ ID NO: 4491:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 291 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4491:

AGGTCGACT CTAGAGGATC CCCGATGAGT TTAAAGAAAA ATATCAAACA CCTGAATTAT 60  
 ATTTTAAAGC TTGGCAAGGT TTTTACCACG AGGTTCAAA TGAGCCAGAA CGTGATGAAG 120  
 TAATGCGTTA TATTCGACT TTCTTAAATA ACAGCGTCAA TACAATGGGC TTTATTGTG 180  
 AAGATGACGA AATTGTGAA ATTTAATATT CTAAAAAGGT TGGGACATAA ATCCCTAAAA 240  
 AACAGCAGTA AGATAATTTT CCATTAGAAA ATATCTTACT GCTGTGcncn A 291

(2) INFORMATION FOR SEQ ID NO: 4492:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

GCGCTCTCAG CTTGGTCTT CGACTGGCAC TGCTCCCTCA GGAGTCTCGC CATTAATACT 60  
 ACGTATTAAC ATGTAATTTT ACTTTGAAAT ACTTAAAAAA ATAAAAACACT TTGCCCAACT 120  
 5 TACACTACCA ATAGAAACTG CTGTTAGAAT TCCTCAAAAT GATATTTGCG GATATGTTAA 180  
 TGAAATGTGT AAAAAGATAG CTGATAGCGA GATTGATGG AATTCAGACA TCATCGTGGG 240  
 10 CGCAACATCC TATCATCTAA AAATGATGTT AAAAATCACC TGCATATTGC ATATACTGCA 300  
 ATCTGGAATT TTCTGGGCCG TGAGAATGAG AAAAATnGAC nTCATGAACA GTGATTGCGA 360  
 ATGGATGTGG GTTAAGCTnC AAGATTCAAA CACCTTGCT 400  
 15 (2) INFORMATION FOR SEQ ID NO: 4493:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 265 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 20 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4493:  
 25 TGATCCAGAG ATTTCCGAAT GGGGAAACCC AGCATGAGTT ATGTCATGTT ATCGATATGT 60  
 GAATACATAG CATATCAGAA GGCACACCCG GTAGAATGA AACATCTTAG TACCCGAGAG 120  
 30 AAGAGAAAGA AAATTCGnTT CCCTTAGTAG CGGCGAGCGA AACGGGAAGA GCCCAAACCA 180  
 ACAAGCTTGC TTGTGGGGT TGTAGGACAC TCTATACGGA GTTACAAAGG AnGACATTAG 240  
 ACGAATCATC TGGAAAGGTG AATCA 265

35 (2) INFORMATION FOR SEQ ID NO: 4494:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 293 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4494:  
 45 CATTACTAAA AAAGATAATC AAGGTATGAT TTCACGCGAT GTTTCAGAAT ACATGATTAC 60  
 TAAGGAAGAG ATTTCTTGA AAGAGCTTGA TTTTAAATTG AGAAAAACAAC TTATTGAAAA 120  
 50 ACATAATCTT TACGGTAACA TGGGTTCAAG AACAAATCGTT ATTAAAAATGA AAAACGGTGG 180  
 GAAATATACG TTGGAATTAC ACAAAAAACT GCAnGAGCAT CGTATGGGCA GACGTCATAG 240  
 ATGGGCCCTA TATGATACC ATTGGAGGTG AATnTAAATA ACCATGCACT CTC 293

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- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 256 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4495:

ACTTACAAAG TTCTGTGAAC CAAGTACCAT CAACTGCTGG TATGACGCAA CAAAGTATTG 60  
 ATAACATATAA TGCAGAAGAG CGTGAAGCAG AAACGTAAAT AACTGCAGCT CAACGTGTTA 120  
 TTGACAATGG CGATGCAACT GCACAACAAA TTTCAGATGA AAAACATCGT GTGCGATAAC 180  
 GCATTTAACA GCATTAAAC CAAGCGAAAC ATGAATTTAA CTGCAGATTA CACATGCCTT 240  
 AGGAGCAAGC AGTGCA 256

(2) INFORMATION FOR SEQ ID NO: 4496:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 254 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4496:

GTCATCAGAA ACCCTTGTC CACAAGGCTT GTATTTTTTA TACTTATTTT TTAATTTAAA 60  
 TTCATCATTA TCTAATTAA AACATATAC TAAACGTTTC ATAATTATCG CCTGTACAAT 120  
 ACGCACAAAA ACATGTCTTG AAACGCTTT CATTACTCTA AATATCCCAA TATACTTTTT 180  
 ATATCGTTCG GATTCTGAGT ATTCAGACG ATTTTCTGCA TAAATAATAA CGTGTTTCAA 240  
 GGCAATATAT TGCA 254

(2) INFORMATION FOR SEQ ID NO: 4497:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 269 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4497:

AATCGGCTGT CTGATTCTGA ATCGCTATCT GAGTCCGAAT CGATATCTGA ATCCGAGTCG 60  
 CTATCCGAGT CTGAGTCGCT ATCTGAATCC GAGTCACTGT CGGAGTCGGA ATCATATCTT 120



	GAGTCACTGT CGGAATCTGA ATGCTATCT GAATCCGAAG TCACITGGTCG GGAATCTGAG	240
	TCACITGThGG AATCTGAATC GCTATCTGA	269
5	(2) INFORMATION FOR SEQ ID NO: 4498:	
	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 273 base pairs	
	(B) TYPE: nucleic acid	
10	(C) STRANDEDNESS: double	
	(D) TOPOLOGY: linear	
15	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4498:	
	CACCCCGGCA CTATAAAAT GGAGCAGAAG ACGGGATTGC AACCCGGCAG CCAACCTTG	60
	GCAAGGTTGT ATTCTACCGC TGAAGTACTT CTGCATATGC GGGTGAAGGG AGTCGAACCC	120
20	CCACGCCGTA AGCTTAGhAT ACCTCAAGTC TAGTGCCTCT GCCAATTCG CCACACCCGC	180
	AAATGGTGAG CCATAGAGGA TTGAAACCTC TGACCTCTG ATTAAAGATC AGATGCTCTA	240
	CCAACCTGAGC TAAATGGCTC TThCAGGTGC CGG	273
25	(2) INFORMATION FOR SEQ ID NO: 4499:	
	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 314 base pairs	
30	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: double	
	(D) TOPOLOGY: linear	
35	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4499:	
	GTAGTAAAAC GCATTAGTG ATTGAAACAG GCAAGATAGA CGCGGGATAT CACGGCAATT	60
	TAGGGATTAA TATCAAGAAT GACGCTATTG CATCGAATGG TTATATCACA CCAGGTGTTT	120
40	TTGAATATTA AAAGGAGAAT CGATTGAAG TGCnnCATAA GACAATACGG ACTTATCAAA	180
	TCAACGAAGG AGACAAACTA GCTCAATTGG TTATCGTGCC TATATGGACA CCTGAACATA	240
	AGCAAGTGGA GGAATTGAA GTTGTTCAhA CGTGAGAGAA AGGCTCGGAG AGCGGGTGAA	300
45	AGCATCTTAG TCGA	314
	(2) INFORMATION FOR SEQ ID NO: 4500:	
	(i) SEQUENCE CHARACTERISTICS:	
50	(A) LENGTH: 304 base pairs	
	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: double	
	(D) TOPOLOGY: linear	
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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4500:

ATTGTAAGGC TATCATGTCA AAGATTATAA CAATAAATCT GGTGAGATT TGGTGGCGGG	60
GCGATGGAAG CTATCTATTT GACCATCCAT TTGGCAAAGG TTTGGGAGTT ACACAGGTGG	120
ACTTAACCTT AATGGCGGTC GTCACTATGG TATCGACTTT GGTATGCCTA CAGGAACGAA	180
CCATTTATGC TGTAAAGG CGGTATAGCT GATAAAGTAT GGCCTGATTA CGGTGGCGGT	240
AATTCTATAC AAATTAGGAC CGGTGCTAAC GAATGGAGCT GGTATATGCA TTTATCTAnG	300
CATT	304

(2) INFORMATION FOR SEQ ID NO: 4501:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 253 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4501:

TTCTTCATT CTCATAAAG TTGCATCATG ATCAGATCAG TTTAGAAAA ACTATTCTA	60
TCTTTAAGAA TCGATTTTGG TTCTTCATAT TTATTTTTTC TTTCGGAATA ATCATCAAA	120
TTCTTTTGA ACTTCCTAAT CTCAGTTATT TTTTACGGG TCTGTTTCT AATTGAGCA	180
CAATCTTCGT TCTCAATAAG AATGATTAA ATCTnCGATT TCTTTATCTA AATGGACTAC	240
CAATTAATC TAT	253

(2) INFORMATION FOR SEQ ID NO: 4502:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 257 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4502:

AGTTCCGTCC CTATCCGTGG TGGCGTAGG AAATTTTnGA GGAGCTGTCC TTAGTACGAG	60
AGGACCGGGA TGGACATACC TCTGGGTGAC CAGTTGTCGT GCCAANGCAT AGCTGGGTAG	120
CTATGTGTGG ACGGATAAG TGCTGAAGAT GCTTAAGCAT GAAGCCCCC CAAGATGAGA	180
TTTCCCAACT TCGGTTATAA GATCCCTCAA AGATGATGAG GTTAATAGGT TCGAGGTGA	240
AGCATGGTGA CATGTGG	257

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 270 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4503:

ATACGTTTAA	TACACAAAA	ACTGCAAGC	ATCGATGGCA	GACGTCATAG	ATGGCACTAA	60
TATTGATAAC	ATTGAAGTGA	ATATAnAATA	ATCATGACAT	TCTCTAAATA	GAAGCTGTCA	120
TCGGAAAAAC	AAGAAGTTAA	GTGACAAGnT	TTACATGTTG	CTTAGCTTCT	TTTATTATGC	180
GTAATGATGT	AAAAGACGA	ATATTCAATT	GTTTGTAATA	GTGGCATTTC	TATGTCTTAA	240
AAGTGACGAA	ACTTCAAATG	TGCCAAGTGT				270

(2) INFORMATION FOR SEQ ID NO: 4504:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 251 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4504:

TACCTTGACC	GAAGTCTTA	CCTACATCAC	CTAAATTAAT	GACATGTCCA	CCAGTCATAT	60
ACTCTAATCC	ATGGTCGCCG	ATACCTTCAA	CGACAACATC	TACACCACTA	TTTCTAATAC	120
AGAATCTTTC	TCCTGCACTA	CCGTTAATAA	ATGCCTTACC	ACTTGTGCGA	CCATAGAATG	180
AGACGTTACC	AGCAATAATT	TCATTTTGTC	GTTCCTCAAA	AGGTGCTTTG	ACAATGACCG	240
TACCACCGn	T					251

(2) INFORMATION FOR SEQ ID NO: 4505:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 260 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4505:

AGAAGTTAAG	CTCCTTAGCG	TCGATGGTAG	TCGAACCTAC	GTTCCTCGCTA	GAGTAGAACG	60
TTGCCAGGCA	AATGACAAAT	CGGAGAATTA	GCTCAGCTGG	GAGAGCATCT	GCCTTACAAG	120

TAGCTCAATT GGTAGAnCAC TGACTTGTA TCACTAGGTT GGGGGGTCAG TCCTCTGGCC 240  
 GGCAACATCT TTTGnCCATA 260

5 (2) INFORMATION FOR SEQ ID NO: 4506:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 313 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4506:

TTCTTTAGTA GATACTAAGG CGTTATTAGA CGCATTAGAC AATGGTGTGA TTAAAGGTGC 60  
 AGCACTTGAT ACGTATGAAT TTGAACGCAA ACTTTTCCCA AGTGATCAAA GGGGCAAAAC 120  
 20 ACTGAACGAT CCATTGTTAG AATCGTTGAT TGACAGGGAA GATGTCATAT TAACACCACA 180  
 TATTGCGTTT TATACTGAAG CTGCAGTTAA AAATCTATTG TCGTGCAATTA GGTGCAACAT 240  
 TAGGTGTATT GCAGCTTGGG GAACCTTnGnT ACGGGTAAAT TAAAAATCGG CTGTGGGSTAT 300  
 25 TTTGGnTTTT GGG 313

(2) INFORMATION FOR SEQ ID NO: 4507:

30 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 252 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4507:

GnCAATACGG CCAATTCTTA AGATTGCTAC TTCTGGGTGG ATTGATAACT GGAGTGAACC 60  
 40 ATTGTCCACC AGCTGnAACC GATATTACTG ATTGTGCATG TAGCACCTTT CATTTCATCG 120  
 GCTGTTAATT TACCATCAGC TGGCTTTAAC AGCTAATICA TTAATTTCAT CTGAAATTTG 180  
 45 GGAAAAATAGA CTTACGGATC AGCATGTTTA ACAACAGSTA CTAATAATCC TCTATCAGTG 240  
 TCTGCTGCAA TT 252

(2) INFORMATION FOR SEQ ID NO: 4508:

50 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 268 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4508:

CATCGAACCA GATGTACTCG CACTTGTGTA GTCTGATGTT GAATCACTAA CACTATCAGA 60  
 5 TAATGACGTT GAATCACTCA TACTTGTGTA TGTACTTGTC GAAAGCGACA TACTTTGTGA 120  
 ATCACTAGTA CTGTACGCA TCGAAGTACT AGTTGAAGCT GATGTACTAC GAGAGTCACT 180  
 10 TGTGTAGTGT GATGTACTTG CTGATCCCTGA TGCACITGTA CTCTTGATG TGCITTTGTA 240  
 ATCGGATITC GCTCGTGCnT GGTACTnG 268

(2) INFORMATION FOR SEQ ID NO: 4509:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 296 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4509:

CGAGAGTGGC TTAATTCGGT TACTGCTATC AcgTAAGGGG CGGAACCCCC CTAACACTTA 60  
 25 GCACCTCATCG TTTACGGCGT TGACTACCAG GGTATCTAAT CTGTTTTGAT CCCCACGCTT 120  
 TCGCACATCA GCCTCAGTTA CAGACCAGAA AGTCGCCCTC GCCACTGGTG TTCCTCCATA 180  
 30 TCTCTGCGCA TkTACCCGCT ACACATGGAA TTCCACTTTC CTCTGCTGGC ACTCAAGTTT 240  
 TCCAGTGTCC AATGACCCCTC CACGGTTGAG CCGTGGGCTT nCACATCACA CTTAnA 296

(2) INFORMATION FOR SEQ ID NO: 4510:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 257 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4510:

TTACTACTTA CTGAGTGACC TGTACCTGCT TTCGGAGTAA TTGTGATTGA TGAATTGGT 60  
 45 TTTATAGTAT TGCGATTGAA CGTCACTTTA CCAGTTTGTC CATCTAACGT TACATAGTCA 120  
 GGCTATTTCG CAATTGTCCA TTGnTTATTT TGACCACGAA CAACATTAAAT TGTCTTACTA 180  
 50 TGTGTCTGCA CCATTACCCA CTTnTTTCACT GTAAGCAATA TCCATTGCTT GAGTTGGGAT 240  
 TAATTAAATG GTCCTGA 257

(2) INFORMATION FOR SEQ ID NO: 4511:

(A) LENGTH: 250 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4511:

10 AAAATCAGCAT CAGCCTGCAT TAACGACGTC GTTAATTTAT ATACATCTCC TGTAGTATCT 60  
 AGATAATTCCT TTCCAAGCTC AAATTCCTAAT TCAAGTTCTC GTAAATCCAT CAACTCTATT 120  
 TGATGTCCCT CATTTAGTAC TTCTAGTTCA TTTTAAAT CATCCATAGC AATTCCTCGTT 180  
 15 TTAGAACCTA CTGTGGAACC TGACAATAAT ACAATATTCA nGAGGACGCC CCTCCTATTT 240  
 TGATAAATGC 250

20 (2) INFORMATION FOR SEQ ID NO: 4512:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 253 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4512:

30 AGCTGGnTTC GAACCAACGA GTGACGGAGT nAAAGTCCGT TGCCTTACCG CTGGCTATA 60  
 GCCCAATATA TAGATGGTGG AGGGGGGCGAG ATTGGAAGT CCGAAGCCGA AGAGCGGATT 120  
 TACAGTCCGC CGCGTTTAGC CACTTCGCTA CCCCTCCAGC TTATTCATAT AATTTAATAA 180  
 35 TCAAAATGGT GGAAGAATGA CGGGTTGGA ACGGCGAGC CTCTGCTTGT AAGGCAGATG 240  
 CTCCTCCCGAG CTG 253

40 (2) INFORMATION FOR SEQ ID NO: 4513:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 252 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4513:

50 GnCGACCCCT AATAACTTAA TCTATGTTTC CACCATTTT ATAAGTCAAA CGTTAACATG 60  
 nAAGTTACGT TCTTTTATAA AAAGATTAA ACGCGTTATT AATCTGTGC AGTGTCTTT 120  
 55 CGAACACTAG CGATTATTC TTATGAATTC AAGCTTATTT AAAACTCTTT ATTCACTCGG 180

GTGGAGACTA GC

252

(2) INFORMATION FOR SEQ ID NO: 4514:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 244 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4514:

GTCAATTGAAT ATGGAAACTT TAGAATTACA AGGCGCTAAA TTACGATACC ACCAAGTCGG	60
ACAAGGACCC GTGCTCATCT TTATTCCTGG TGCAACGGT ACCGAGACA TTTTCTGCG	120
TCTTGAGAA CAGTTAAAG ACCATTTTAC TGTTGTAGCC GTTGATGTC GTGATTATGS	180
AGAAAGCGAG TTAACCTGAAC CACTCCCTGA TTCCGCTTCA AACCTGACA GTGATTATCG	240
TGTC	244

(2) INFORMATION FOR SEQ ID NO: 4515:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 243 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4515:

TATTAGGCAA ATCCGGTACT CGTTAAGGCT GAGCTGTGAT GGGGAGAAGA CATTGTGTCT	60
TCGAGTCGTT GATTTCACAC TGCCGAGAAA AGCCTCTAGA TAGAAAATAG GTGCCCGTAC	120
CGCAAACCGA CACAGGTAGT CAAGATGAGA ATTCTAAGGT GAGCGAGCGA ACTCTCGTTA	180
AGGAATCGG CAAAATGACC CGTAACTTC GGGAGAAGGG GTGCTCTTTA GGGTTAACGC	240
CCA	243

(2) INFORMATION FOR SEQ ID NO: 4516:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 267 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4516:

GATTGTCCTT TGGACAATGG TAGGAGAGCG TTCTAAGGCC GTTGAAGCAT GATCGTAAGG 120  
 ACATGTGGAG CGCTTAGAAG TGAGAATGCC GGTGTGAGTA GCGAAAAGAG GGTGAGAATC 180  
 5 CCGTCCACCG ATTGACTAAG GTTTCAGAG GAAGGCTCGT CCGCTCTGGG TTAGTCGGGT 240  
 CCCTAAACCT GAGGCCGCAA nnGTAGG 267

(2) INFORMATION FOR SEQ ID NO: 4517:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 319 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4517:

20 TTGAATCTGA CGAAACGAGA AAAGAGCGCA ACGAGTTTAG TAGAGCTAAA TGAGTAAGCG 60  
 AGAGCGGAAG AGAGGAAAGA AGCAAGCGAT TGTACAAAGT CAAGAAAAGGT CTITAGCGAC 120  
 GATGTTAGCG AACTTACGTT CCGCTAGAGT AGAACGTTGC CAGGCAAAAA ATGGGATGCG 180  
 25 ATGAGCGGCA TTGGAGACCG CAGTCCTnTn TnTTTTTTTA TGGCCTTAAA ACGTCAAAAT 240  
 TAAAAAGTTA AACACAAAGA AAATGGGCTT TGGCGAGTGG AAACGTTTTG AATCTGGAAG 300  
 GAACGAGAAA GAGCGCACG 319

(2) INFORMATION FOR SEQ ID NO: 4518:

30 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 259 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4518:

40 GGTATAATAG ATGACTATGT ACTATTTCGG GTACATCCIT GGCAATATCA GCATATTCTG 60  
 CGAACGCTCT TTGGGAAAGA GATTAGTGAA AAGTTGGTTG TACTATTACC GTTAAATTT 120  
 45 GGAGATTATC TGTCGCTTC AAGTATGCGT TCATTAAATG ATATTGGCGC ACCGTATAAC 180  
 CATGTCAAnG TACCATTTGC AATGCAGTCA TTAGGCGCAT TAAGGCTAAC GnCTACGGTT 240  
 ACATGAAAAA CGGGGAACA 259

(2) INFORMATION FOR SEQ ID NO: 4519:

50 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 253 base pairs  
 55



(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4519:

ATAGGGTGTT	GCTGAATAGG	GCCTTTAGTA	TTTGGTCGTA	CCGnnAACCA	GGTGATCTAC	60
CCTTGGTCAG	GTTGAAGTTC	AGGTAACACT	GAATGGAGGA	CCGAACCGAC	TTACGTTGAA	120
AAGTGAGCGG	ATGAACTGAG	GGTAGCGGAG	AAATCCCAAT	CGAACCTGGG	AGATAGCTGG	180
TTCTCTCCGA	AATAGCTTTA	GGGCTAGCCT	CAAGTGATGA	TTATTGGAGG	TAGAGCACTG	240
TTTGGACGAG	GGG					253

15

(2) INFORMATION FOR SEQ ID NO: 4520:

(i) SEQUENCE CHARACTERISTICS:

20

(A) LENGTH: 245 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4520:

AACTCGTTGC	GCTCTTTTCT	CGTTTGTCA	GATTCAAACG	TTTTCAC TTC	GCCAAAGCCAT	60
TTTTCCTTGT	GTTTACTTTT	TATTTTGACG	TTTITAGACAT	AAAAAAAGAG	ACCTCACGGT	120
CTCAACTTGC	CTGGCAACGT	TCTACTCTAG	CGAAAGCTAA	GTTGGCnACC	ATCGTCGCTA	180
AAGACCTTTC	TTGACTnGTG	ACAATCGCTT	GCTTCTGTCC	TCTCCTTCGG	CTCTCGCTTA	240
CTCAT						245

35

(2) INFORMATION FOR SEQ ID NO: 4521:

(i) SEQUENCE CHARACTERISTICS:

40

(A) LENGTH: 251 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4521:

GGGCCTAAGT	GGACTCGAAC	CACCGACCTC	ACGCTTATCA	GGCGTGC	CGCT CTAACAGCT	60
GAGCTATAGG	CCCATTAATT	TGAATGAACA	AACATTCAAA	ACTGAATACA	ATATGTCACG	120
TTATTCGCA	TCTTCTGAAG	AAGATGTTCC	GAATATATCC	TTAGAAAGGA	GGTGATCCAG	180
CCGCACCTTC	CGATACGGCT	ACCTTGTTAC	GACTTCACCC	CAATCATTTG	TnCCACCTT	240

55

## (2) INFORMATION FOR SEQ ID NO: 4522:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 249 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4522:

```

nATAGAACCT GAAACCGTGT GCTTACAAGT AGTCAGAGCC CGTTAATOGT TGATGGCGTG      60
CCTTTTGTAG AATGAACCGG CGAGTTACGA TTTGATGCAA GGTTAAGCAG TAAATGTGGA      120
GCCGTAGCGA AACGATGCTT GAATAGGGCG TTTAGTATTT GGTCGTAGAC CGAAACCTGG      180
TGATCTACCC TTGGTCAnGT TGAAGTTCAG GTAACACTGA ATGGAGGACC GAACCGACTT      240
ACGTTTGAA                                         249
  
```

## (2) INFORMATION FOR SEQ ID NO: 4523:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 248 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4523:

```

TCCCTATCCG TCGTGGCGT AGGAAATTGT AGAGGAGCTG TCCTTAGTAC GAGAGGACCG      60
GGATGGACAT ACCTCTGGTG TACCAATTGT CGTGCCAAng CATAGCTGGG TAGCTATGTG      120
TGGACGGGAT AAGTGCTGAA GATCTnAAGC ATGAAGCCCC CCTCAAGATG AGATTTCCCA      180
CTTCGTTAT AAGATCCCCTC AAAGATGATG AGGTTAATAG GTTCGAGGTG GAAGCATGGT      240
GACAGTGG                                         248
  
```

## (2) INFORMATION FOR SEQ ID NO: 4524:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 326 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4524:

```

AACGTTAAGA TCCCTATTAA ATTATCTTAG GAATCATCAT GGGCATTATG GATGCTTAA      60
  
```

AAATTAGTAA TCTGAATCTG CTTCTAAACC TTGTCATAAT TTGAACGGCT GTGGCTCGnA 180  
 CCAATACGGG TCGGACCTGC TThAACCATT TTATTGGAAA TCTTCTAAAT TACGGACGGC 240  
 5 ACCCGGATGC TTTTACTTCT ATATCAGCAC CTACTGTATC TTTCTTAAT TTAACGGCTT 300  
 CTGCAGTCGG ACCGGCAACT GCAAAA 326

(2) INFORMATION FOR SEQ ID NO: 4525:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 301 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4525:

20 AAGAGCACCC TTCTCCGAGT TACGGGGTCA TTGCGCGTT CTTAAACGAG AGTCGCTGTT 60  
 CACCTTAGAT TCTCATCTTG ACTACCTTGT CGGTTTGCGG TAnGGCACCT ATTTTCTATC 120  
 TAGAGGTTTT CTCGGCATGT GAAATCAACG ACTCGAGACA CAATGTCTTC TCCCATCACA 180  
 25 GTCAGCCTTA ACGAGTACCG GATTTCCTTA ATACTCAGCC TACTGTCTAG nGGCATCCAT 240  
 CGCAGTThnG TATCCACTGG TCCCCCTCGA TTAAACGATT ATAGGTGGTA CAGATATCAA 300  
 C 301

30 (2) INFORMATION FOR SEQ ID NO: 4526:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 241 base pairs  
 35 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4526:

40 TGATATTATG AGCTGTGTTT TTAGCTTTAG AACCGAAGTC CCCTGCTTTT TTACCAAGAT 60  
 TTTAGTAAC TTGThCCATC CATTTTTTCT TTTTCGTACC ACCATGGAAT TTTGGCAAAA 120  
 45 CACCCATCCG CTGIAACTTC AGAGTGTAT TGGCATTAT TACACTAICT CCAACTCCTA 180  
 GTGGAACAAC CACATCTCGT CCTTGGGGTG CATGGAATGT nCGGTCAGCC CTGTGAATTA 240  
 T 241

50 (2) INFORMATION FOR SEQ ID NO: 4527:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 316 base pairs

55

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4527:

CGATC	CACT	CTTCC	GTCT	CATCG	CCATT	GGCTTT	TTCAC	ACAAT	A	CATG	GACAC	CATGG	60
10	TGTCA	ATGCT	TCTAT	AGAAA	GATCAG	CATG	GAATTT	TATTA	GGTGT	ACAAA	TGACC	ACCGC	120
	ATCAACA	AGT	TTAAAC	AGCT	CGCTAG	GTGT	CTCAAC	TGCA	TGAGG	TATAT	TGAAAG	CGCT	180
	TCGCA	ACCAT	nCAAT	CATCT	GGCACT	GTTA	TTGAAT	ATCT	TGTG	ACTGGC	AACTT	AATGA	240
15	GnACT	GTGTC	TTTTG	GAGTT	TCCAG	nCAAT	GCCGGG	AATT	ATGGAC	CGGT	CTTGG	TGGCA	300
	ATACCA	CCCA	ACACT										316

20

(2) INFORMATION FOR SEQ ID NO: 4528:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 251 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4528:

30	GTCCCA	AGGG	TTGGG	CTGTT	CGCCCA	TTAA	AGCGT	ACCG	ACGAT	GGGT	TCAGA	ACGTC	60
	GTGAG	ACAGT	TCGGT	CCCTA	TCCGT	CGTGG	GCGTA	GAAAT	TTGAG	AGGAG	CTGTC	CTTAG	120
	TACGAG	GAGG	AnCGG	ATGG	ACATAC	CTCT	GGTg	nACCA	TTGTC	GTGCC	AACGG	CATAG	180
35	CTGGG	TAGCT	ATGTG	TGGAC	GGGATA	AGTG	CTGAA	AAGCAT	CTAAG	CATGA	AGCCCC	CCTC	240
	AAGAT	GAGAT	T										251

40

(2) INFORMATION FOR SEQ ID NO: 4529:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 318 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4529:

50	AGTAC	GTGAC	GTTCA	CTACT	CTCACT	ATGG	CCGTAT	GTGT	CCAATT	GAAA	CACCT	GAGGG	60
	ACCAA	CATT	GGATT	GATTA	ACTCAT	TATC	AAGTT	ATGCA	CGTG	TAATG	AATT	CGGCTT	120
	TATTG	AAACA	CCATAT	CGTA	AAGTT	GATTT	AGGATA	CACA	TGCTAT	CACT	GATCA	AATGA	180

55

ATGGTCGTTT AGGTGATGAG TGTATGCGTT CGGGnAChAT CAGTATGCAA GAAAAGGTTT 300  
 GTGACGCGAC AGTGTChA 318

5 (2) INFORMATION FOR SEQ ID NO: 4530:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 240 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4530:

TAGCTGTGTG ATAAATGTGA AGTGCGGCAC CACATAAGCC GAACATCATC GTAATAAAAC 60  
 GGCTTGACAT ACAGCGTGAC ACACCTGAAT AATACTCGT CACATCTGGA TCACCAAGTT 120  
 20 GAGCAAAGAn GATGTTCTnG GTACCTTGAA CTAAGTCCCC TTTGACTTCT AAAGTACCAC 180  
 CAAGTCCCGT CTGCCAAAAC GGTAAGTAAA AAATATGGTG TAAACCGAGT GGACCTAACA 240

(2) INFORMATION FOR SEQ ID NO: 4531:

25 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 254 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4531:

CGGCTCTTCT GCGACGTTAA CCTAAAGTG CACCCCTTCT CCCGAATTAC GGGGTCATTT 60  
 35 TGCCGAGTTC CTTAACGAGA TTCGACTCGn TCACCTTAGA ATTCTCATCT TGACTACCTG 120  
 TGATCGGTTT GGGTTAGGG GCACCTATT TCTATCTAGA GGCTTTTCTC GGCAGTGGA 180  
 40 AATCAACGAC TCGAAGACAC AATGCTTCT CCCCATCACA GChCAGCCTT AACGAGTACC 240  
 GGATTGCTCT AATA 254

(2) INFORMATION FOR SEQ ID NO: 4532:

45 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 238 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

50 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4532:

55

TGAATAAACCC GAATGTGGCT AAAGTCGTGA ACGCAAAATA TGACGTCATC TATAACGGAC 120  
 ATACTTTTGC AACATCTTTA CCAGCGnAAT TTGTAGTAAA AGATGTGCAA CCAGCGAnAC 180  
 CAACTGTGAC TGAAACAGCG GCGAGGAGCGA TTACAATTGC ACCTGGAGCA AACCAAAC 238

(2) INFORMATION FOR SEQ ID NO: 4533:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 266 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4533:

GGTCATTAAAT AAAATATCTA AAGCCATTAC TGCATAAAAA TCTCATCAAG CCAATACCTA 60  
 CATTGTACTA CTGnCACTT TAGACAGGnC AAGGGGTAG CTACCGATAA TTCAGGAGCA 120  
 TTAACGCAAC CGACATTGTA CTGTATTAAA TGATAGAGGT TCTGGAAAAAC GCCCCAGGTG 180  
 GTGGAGTTCA AGAAATAATT CACAGGGCTG ACGGAACATT CCTGCACCCC AAGGACGAGA 240  
 TGTGGTGTGT CCACTAGGAG TTGGAA 266

(2) INFORMATION FOR SEQ ID NO: 4534:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 264 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4534:

TACTCAGAGG ATACCCCGAC GTAATGCATT CAATTCAATT TTTAAACGTA TTATTTCAAT 60  
 GAGCAGAAAG AAAATTATGG CACCAAACTT TAATATTTTT TTCATGTCA TTCTTTTGA 120  
 GGGAGTGGGA CAGAAATGAT ATTTTCGCAA AATTTATTTC GTGTCACCCAC CCCAACTTGG 180  
 CATTGTCTGT AGAAATTGGG AATCCAATTT CTCTTTGTnG GGGCCCATCC CCAACTTGCA 240  
 CATTATTGTA AGCTGACTTT TCGT 264

(2) INFORMATION FOR SEQ ID NO: 4535:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 250 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4535:

GCGAATGGAT AACAGTTGAT ATTCCTGTAC CACCTGATAA ATCGTITTTAA TCGATGGGG 60  
 5 GACGCATAGG nATAGGCGAC TGCCGATTGG ATTGCACTCT AAGCAGTAAG GCTGAGTATT 120  
 AGGCAAAATCC GGTACTCGTT AAGGCTGAGC TGTGATGGG AGAAGACATT GTGTCTTCGA 180  
 GTCGTTGATT TCACACTGCC GAGAAAAGCC TCTAGATAGA AATAGGTGC CCGTACnG 240  
 10 AAACCGACAC 250

## (2) INFORMATION FOR SEQ ID NO: 4536:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 235 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4536:

AATGACGGGT TCGAACCGCC GACCTCTGCG TTGTAAGGCA GATGCTCTCC CAGCTGAGCT 60  
 25 AATTCTCCGA TTTAAACTG CTTGGCAACG TTCTACTCTA GCGGAATTA TTCGAAGTAC 120  
 CATCGACGCT AAGGAGCTTA ACTTCTGTGT TCGGCATGGG AACAGGTGTG ACCTCCTTGC 180  
 TATAGTCACC AGACATATGA ATGTAATTTA TACATTCAA ACTATATAGT AAGTA 235

## (2) INFORMATION FOR SEQ ID NO: 4537:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 234 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4537:

TGCATCTTCA CAGGTACTAT GATTTCACCG AGTCTCTCGT TGAGACAGTG CCCAAATCGT 60  
 TACGCCCTTC GTGCGGGTCG GAACTTACCC GACAAGGAAT TTCCTACCT TAGGACCGTT 120  
 45 ATAGTTACGG CCGCGGTTA CTGGGGCTTC GATTGTTAGC TTGCGAGAAG CTAACCACTC 180  
 CTCTTAACCT TCCAGCACCG GGCAGGGGTC AGCCCTATAC ATCACCTTAC GGTT 234

## (2) INFORMATION FOR SEQ ID NO: 4538:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 242 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4538:

5 ACCCTCTGCT TGTnAGGCAG ATGCTCTCCC AGCTGAGCTA ATTCTCGGAT TTAAAACTGC 60  
 CTGGCAACGT TCTACTCTAG CGGAACGTAA GTnGACTACC ATCGACGCTA AGGAGCTTAA 120  
 10 CTTCTGTGTT CGGCATGGGA ACAGGTGTGA CCTCCTTGCT ATAGTCACCA GACATATGAA 180  
 TGTAAATTAT ACATTCAAAA CTAGATAGTA AGTAAAAGTG ATTTTGCTTC GCAAACCAT 240  
 TA 242

## (2) INFORMATION FOR SEQ ID NO: 4539:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 234 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 20 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4539:

25 TCATTAAACAC CATCACCATA AATAAAACCT TCCATATCTG TTCTGTGCCC AATAAAGCCA 60  
 TATTGCGTTT GgnCTGTGCT GCCAGTGCAA GATTCCAAC GATAATTCTT AGGCGTCACT 120  
 GCTGGCGAAC CATCTAATGG ATAATCATAA TCCATCGTGC GTCCAAGAAG TACTTGnTTT 180  
 30 ATTTAAAGTT TGTATTGTGG AATCCTGTGC ACATGTTCTC ACTCTCTGT ACCT 234

## (2) INFORMATION FOR SEQ ID NO: 4540:

35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 242 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4540:

ACACAAGAA AAATGGCTTG GCGAAGTGAA AACnGTTGAA TCTGACGAAA CGAGAAAAGA 60  
 45 GCGCAACGAG TTTAGTAGAG CTAAATGAGT AAGCGAGACC GAAGAGAGGA AAGAAGCnAG 120  
 CGATGTGCAC AAGTCAAGAA AGGTTCTTAG CGAGGATGGT AGCTAACTTA CGTTCGCTA 180  
 GAGTAGAACG TTGCTAGACA AGAAATGAAT GCGATGAGCC GCATTGAGTG TGAATTGAT 240  
 50 AT 242

## (2) INFORMATION FOR SEQ ID NO: 4541:

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(A) LENGTH: 240 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4541:

10 GCCCTTAATA ACTTAATCTA TGTTCACACC ATTTTATAA GTCAAACGCT CACATACGGC 60  
 TTCGTTTTC A TTTTATAA TGCTCATTTA CATAAGTAAA CTCTGCTTTA AAATAATTTA 120  
 ACTCATTGTC TGCTAAACGT TTCCTTTTAT AAAAAGATT AAACGGCTTA TTAATCTGT 180  
 15 GAAGTGTCTT TTCGAACATA GCGATTATn TCTTATGAAT TCAAGCTTAT TAAAACTCT 240

(2) INFORMATION FOR SEQ ID NO: 4542:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 242 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4542:

AAGCTAGCAA TGATGTCAAG CAATGGCAAC ATGTGCTCAN TTAGCTAATA TGCAAGCACA 60  
 30 TGGTGAATAT GACGAGGTTG CAACTTCAAC GCGAGGnTG ATGAATGCCT TACGTTTGCG 120  
 TGAGACAGTA GGTATGGGCC GCGGTATTAC AGGTGGTAAT GGCATACTGA GCTGACGATT 180  
 ATGATATTGT CAGCTTTTCT TCTCTGTATG CAGAAGCGAT TTACACGTAC GAGGTACACA 240  
 35 TG 242

(2) INFORMATION FOR SEQ ID NO: 4543:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 239 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4543:

TGGTGAGCCA TAGAGGATTC GAACCTCTGA CCCTCTGATT AAAAGTCAGA TGCTCTACCA 60  
 50 ACTGAGCTAA TGGCTCTTCC ATGGTGCCGG CCAGAGGACT TGAACCCCCA ACCTACTGAT 120  
 TACAAGTCAG TTGCTCTACC AATTGAGCTA GCGCGGCAAT ATGTAAGATT AAATGGTGG 180  
 55 GAnTGACGGG TTCGAACCGC CGACCTCTG CTGTAAAGGC AGATGCTCTn CCAGCTGAG 239

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 239 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4544:

ATAGAGGATT CGAACCTCTG ACCCTCTGAT TAAAGTCAG ATGCTCTACC AACTGAGCTA 60  
 ATGGCTCTTC CATGGTGCCG GCCAGAGGAC TTGAACCCCC AACCTACTGA TTACAAGTCA 120  
 GTTGCTCTAC CAATTGAGCT AGGCCGGCAA TATGTAAGAA TAAATGGTGG AGAATGACGG 180  
 GTTCGAACCG nCGACCTCT GCTGTAAGG CAGATGCTCT nCCAGCTGAG CTAATTTCT 239

(2) INFORMATION FOR SEQ ID NO: 4545:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 233 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4545:

AATTCATGCT TTCAAAAGAC GATATACTAC GAACTCCTA CGAACTTGTC CAAGGATTAC 60  
 GAAAAGACCT AAGGTTATGT AATTGGCCTA AATTATTAA TCGTTTAAAT TCAGTTAGTA 120  
 AAAAGTCTGT GAGTAAGGGT GTATGGAAAG TGGTTAATA TTATAGAAA CATCAAAGGA 180  
 TGTTAAGAAA TACnATTAT TACCCAGCAT TTAATAATGG TGCTATAGAA GGA 233

(2) INFORMATION FOR SEQ ID NO: 4546:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 247 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4546:

ACTTTGTGT CTTCATCAA CITGAGACTT CATAACGTTT TGCATCTICG CCACCTTCAC 60  
 CACTATTACT CTTCCACCT AATTGGTTCA TGGCTTGTC TAnTTTTICA TGTGCTTCGG 120  
 CTGAAATCGA TCCATAACTC ATCGCCCTG TATTAAAGCG TTGACAAATG TCACATTACG 180  
 GTTCAACTTG GnCgATGTCA ATCGGTGTAC ATGCTTTAAA TTCAAGTAAA TGTCTAATGT 240

## (2) INFORMATION FOR SEQ ID NO: 4547:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 300 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4547:

GAGGAAATTA CTGAAAACAA TCATCATATT TCTCATTCTG GTTTAGGAAC TGAAAAATGGT	60
CACGGTAATT ATGGCGTGAT TGAAGAAATC GAAGAAAATA GCCACGTGGA TATTAAGAGT	120
GAATTAGGTT ACGAAGGTGG CCAAAATAGC GGTAATCCAG TGCATTGAG GAAGACACAG	180
AAGAAAGTTA AACCGAAATA TgnaACCAAG GTGGGCATTA TCGTTGGTTA TCGATTTTCG	240
ATAGTGTACC TCAAAATTCA TGGGTCAAA TTAATGGTTA ACCCATCCAT TCGAnGnAGG	300

## (2) INFORMATION FOR SEQ ID NO: 4548:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 306 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4548:

TTGCTATAGT CACCAGACAT ATGAATGTAA ATTATACATT CAAACTAGA TAGTAAGTCA	60
AAGTGATTTT GCTTCGCRAA CATTATTTT GATTAACTCT TCGATCGATT AGTATTCGTC	120
AGCTCCACAT GTCACCATGC TTCCACCTCG AACCTATTAA CCTCATCATC TTTGAGGGGA	180
TCTTGATAAA CCGnAAGTTG GGGAAATCTC ATCTTTACGG GGGGGCTTCA TGCTTAGGAT	240
GGCTTnTnCAG CACTTTATGC CCGGnCCAC ACATTAGGCT TACCAGCCT ATGCCCGTTT	300
GGCACG	306

## (2) INFORMATION FOR SEQ ID NO: 4549:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 232 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4549:

CTTCTACTTT TGTACCATCA ATAAGATTTT GCTTTAAACA TTGACTATGA AACTGGATAA 120  
 ATAAAGATTC AATTAACGCA TCAGTATTAG GATTCACTCT AATACGATTA ATAGTTTTAT 180  
 5 AAGAAGGTGn TTGATTTTGA GCTAACCACA TCATTGGAAT ACTGTCACTn AG 232

(2) INFORMATION FOR SEQ ID NO: 4550:

- (i) SEQUENCE CHARACTERISTICS:  
 10 (A) LENGTH: 258 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4550:

CTGGGTTTCAG AACGTCGTAT GnAGTTCGGA TCCTATCCG TCGTGGGCGT AGGAAATTTG 60  
 20 AGAGGAGCTG TCCTTAGTAC GAGAGGACCG GGATGGACAT ACCTCTGGTG TACCAGTTGT 120  
 CGTGCCAAG CATAAGCTGG GTAGCTATGT GTGGACGGGA TAAGTCTGA AACATTCTTA 180  
 AGCATGAAGC CCCCTCAAG ATGAGATTTC CCAACTCGG TTATAAGATC CCTCAAAGAT 240  
 25 GATGAAGTTA ATAAGTTC 258

(2) INFORMATION FOR SEQ ID NO: 4551:

- (i) SEQUENCE CHARACTERISTICS:  
 30 (A) LENGTH: 400 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4551:

TTACAGGCAT GCGAGTTGGG GTGAGGGCCC ACACAGAAGC TGACGAAAAG TCATGACAAT 60  
 40 AATGTGCAAG TTGGGGATGG GCCCACAAAG AGAAATTGGA TTCCCAATTT TACAGACAAT 120  
 GCAAGTTGGG TGGGACGACG AAATAAATTT GCGAAAATAT CATTTCTGn CCTCCCTCA 180  
 AAAGATGACA TTGAAAAAAT ATTAAAGTTG GTGCCATATT TTCTTCTGCT CATGAATATA 240  
 45 CGTTAAATTT GATTGATCAT CGCGAATTGA TATTATCTC ATTATAAAAA TACTTATTAC 300  
 ACTTACCGTA TGATAGTTTG nTATATACTC TGATAAAGTC AAACCTAATA GCGTTTCTAG 360  
 CTGTGnGTGT TCAATAATTA TATACATTAT CAGGCTTTAA 400

50

(2) INFORMATION FOR SEQ ID NO: 4552:

- (i) SEQUENCE CHARACTERISTICS:  
 55 (A) LENGTH: 312 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4552:

ATAGGAAACT GCCAATTGGA CGGTTGCCGC ATTCAAACCC AGCAGGATTA CGGCGAATTG 60  
CACGTGAAnC ATTCTACAG CTGTATCTTG ACCTATGATT TTACTTCTTA AACGATTAGA 120  
AATATTTTTT AAAGTTCAA TATCGTTATC ATCCATTGG AGAACTGGG AATACCAATTG 180  
AATCGTTGnA ATAGTATCTG GAAATATCAT GGAACGTAG CAACAGCAGT GTGTTGCACC 240  
ATTnACTGAT TTGCTAATT TATCTGGTG AATGGAATTG GATTGCAATT TTGGAATGTG 300  
CGTGACGCTT TT 312

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(2) INFORMATION FOR SEQ ID NO: 4553:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 254 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4553:

AGCAGCGATC AAAAATAATC CGCAATACGC TGGCAAACTA CCAATACCAA ACCATAGAAC 60  
AACAAATGGT GCCCATGCTA TCGGAGATAT CGGCCTAATC AATTGAAATA CGGTTTCGAT 120  
AGCGTTGTAT AGCCAACGAT TCCTTCCAAG CAAGAAGCCC AATGGAATAG CAACCAACAA 180  
TGCGACAACA AAGnCGCTA CAAATCTCCA TGAACTAATT GCTAAATGTG GnGAATTTCT 240  
CCAGTAACAA TGGA 254

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(2) INFORMATION FOR SEQ ID NO: 4554:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 251 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4554:

GGTCTGAATC GCTATCTGAG TCTGAATCGC TATCTGAGTC TGAATCACTG TCTGAGTCCn 60  
AGTCACTGTC TGAATCTGAC TCACTATCTG ATTCTGAGTC GCTATCTGAT TCTGAGTCCG 120  
TGCTGGAAAT CTGAATCACT GTCTGGAATC CGAATCGCTA TCTGGAGCTG AGTCGCTATC 180

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CTGGGGCTTG G

251

(2) INFORMATION FOR SEQ ID NO: 4555:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 251 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4555:

TACACAAAGA GATAAATTAC TTATGCAAAG GCGAGGAAT CACATGTCTA TTACTGAAAA	60
ACAACGTCAG CAACAAGCTG AATTACATAA AAAATTATGG TCGATTGCGA ATGATTTAAG	120
AGGGAACATG GATGCGAGTG AATTCCGTAA TTACATTTTA GGCTTGATTT CTATCGCTTC	180
CTATCTGAAA AAGCCChACC AGAATATGCA GTGCCCTGTC AAGnGAAGAC ATCACGTTCC	240
AGAAGCATGG C	251

(2) INFORMATION FOR SEQ ID NO: 4556:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 243 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4556:

AGCTACCCCG GGGATAACAG GCTTATCTCC CCCAAGAnTT CGCATCGACG GGGAGGTTTG	60
GCACCTCGAT GTGGGTCAT CGCATCCTGG GGCTGTAGTC GGTCCTCAAGG GTTGGGCTGT	120
TGCCCCATTA AAGCGGTACG GAGGCTGGGT TCCGAACGTC GTGAGnCCGT TCGGTCCTTA	180
TCCGTCGTGG GCGTAGGAAT TTGAGAGGAG CTGTCCTTAG TACGAGAGGA CCGGGTGGAC	240
ATA	243

(2) INFORMATION FOR SEQ ID NO: 4557:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 235 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4557:

TCATTATTTT AAATGCTCAT TTACATAAGT AAACCTGCT TTAATAAAT TTAACTCATT 120  
 GTCGTCTAAA CGTTTCTTTT TATAAAAAGA TTTAAACGGC TTATTAATCT TGTGAGTGT 180  
 CTTTCGAACA CTAGGCGATT ATTTCTTATG AATCAAGCT TATTTAAAAC TCTTG 235

(2) INFORMATION FOR SEQ ID NO: 4558:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 275 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4558:

CGTTAAGCA CTAAATCGC TTAATAACGG CTTTCTATCG CGCGCAACAT CTCGTTTGAC 60  
 TCGTTTTCT TTCAAAGCTT GACGTTATCA TATTTTTCT TACCTCGTGC ACACCAAGTA 120  
 ATACTTTACA ATGTCATGC TTCAAATAAA GCTTAAACGG ACAATCGAAT AACCAAnCTC 180  
 ACGTGTTGA TCACCCAATT TAATGATTTC ACGCTTGTC AATAATnATT TTCGAGACGA 240  
 GAGGATCGGA TTAANAACGAT CCCCTCCTCG TATGG 275

(2) INFORMATION FOR SEQ ID NO: 4559:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 234 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4559:

TTATATGGAT GTATCGCGA AGCAAGTTGT TTCAGCAGCG ACAnATGTAT TCCGATGACT 60  
 CAAACCGTGC ATTGATGGT GCGAACATGC AACGTCAAGC AGTGCCTTTG GATGAATCCA 120  
 GAAGCACCAT TTGTTGTAC AGGTATGGAA CAGTTGCAG CAGTGATTT CTGnGTGCGG 180  
 CTATTACAGC TAAAGCACAG AGGTCGTGTT GAACATGTTG GAATCTAATG AAAT 234

(2) INFORMATION FOR SEQ ID NO: 4560:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 232 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

TTATTTTGAC GTTTTAGACA TAAAAAAGA GACCTCACGG TCTCAACTTG CCTGGCAACG 60  
 TTCTACICTA GCGGAATTA nTGGCTACCA TCGTCGCTAA AGACCTTTCT TGA CTGTGTGA 120  
 CAATCGCTTG CTCTTTTCCT CTCCTTCGGC TCTCGCTTAC TCATTTAGCT CTACTAAACT 180  
 CGTTCGCTC TTTTCTCGIT TCGTCAGAIT CAAACGTTTT CACTTCGCCA AG 232

(2) INFORMATION FOR SEQ ID NO: 4561:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 257 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4561:

TCAAAGSACG CATACCATTA CGGGTCTGCT ACTTGAAGC ACACGGTTTC AGGTTCTATT 60  
 TCACTCCCTC TCCGGGGTGC TTTTnACCTT TCCCTCACGG TACTGGTTCA CTATCGGTCA 120  
 CTAGAGAGTA TTTAGCCTTA GGAGATGGTC CTCCTCAGATT CCGACGGAAT TTCACGTGCT 180  
 CGTCTGCTACT CAGGATCCAn TCAAGAGAGA CAACATTTTC GACTACAGGA TTATTACCTT 240  
 CTTTGATTCA TCTTGTC 257

(2) INFORMATION FOR SEQ ID NO: 4562:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 240 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4562:

TACCTAATAA GTTGTGAATT TGAACAGCGG CTGCTTTACA nTGGAACTGC TGATTGAGTT 60  
 GCCACAATTA CCATACCAAT TTTCTTTTTC TCTTCGTCTG TnATAATGTC CTTAGCAGCG 120  
 TTAGCTCCGA TTGAACGAT GTCTTGGTTT ACAGGACTAA CAGCCATTTC AGTTTGACCA 180  
 ATTCCAATTA AAAATTGTGT TGGGTCTACT TGGCGTGGCT TCCTGCTGAA TTAGCCCATG 240

(2) INFORMATION FOR SEQ ID NO: 4563:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 225 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear



## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4563:

CAAAGCTTAC TTACAGCTCC CCAAAGCATA TCGTCGTTAG TAACGTCCTT CATCGGCTTC 60  
 5 TAGTGCCAAAG GCATCCACCG TGGGCCCTTA ATAACTTAAT CTATGTTTCC ACCATTTTTA 120  
 TAAGTCAAAAG GCTCACATAC GGCTTCGTTT TCATTATTTT AaATGCTCAT TTACATAAGT 180  
 10 nGACTCTGCT TTAATAAAT TTAACTCATT GTCTGCTAAA CGTTT 225

## (2) INFORMATION FOR SEQ ID NO: 4564:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 233 base pairs  
 15 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4564:

TGTTAATTGG nGAATTGGA TACTGGTTAT ATTCAGGTGC ACCGCAAGCA ACTTCTATTG 60  
 ATGGCCTAAC TGCCTTTTTA CCTCAAGCAA TGGSTATGGT AATTGTTGCA GTCATTATATG 120  
 25 GCTTTATGAA TATGAAAGCA GAGGAATCCC ATCCCGTAA TAAAATTACG GTGGTTACAA 180  
 AATTATTCA GGTTCCTTTC TTTTGCATT TGGTGCTTTA ACCATATCTT nTT 233

## (2) INFORMATION FOR SEQ ID NO: 4565:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 225 base pairs  
 (B) TYPE: nucleic acid  
 35 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4565:

AGCTCAGATA GCGCTCAGAC TCAGACAGCG ACTCAGATTC AGATAGCGAT TCAGACTCAG 60  
 ACAGCGACTC AGACTCAGAC AGCGACTCAG ACTCAGATAG CGACTCAGAT TCAGATAGCG 120  
 45 ATTCAGACTC AGACAGCGAC TCAGATTTCAG ATnCGGATTC GGanTCAGAC AGCGATTTCAG 180  
 ATTCAGACAG CGACTCAGAC TCGGATAGCG ATTCAGATTC AGATA 225

## (2) INFORMATION FOR SEQ ID NO: 4566:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 237 base pairs  
 50 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4566:

CCAAC TGGAG	CTAATGGCTC	TTCCATGGTG	CGGCCGAGAG	GACTTGAACC	CCCAAC TAC	60
TGATTACAAG	TCAGTTGGTC	TACCAATGTA	GCTAGGCCGG	CAATATGTAA	GAATAAATGG	120
TGGAGATGTA	CGGTTTCGAA	CGGCCGAnCC	TCTGCTTG TG	AAGGCAGATG	CTCTCC CAGC	180
TGAGCTAATT	CTCCGATTTA	AAACTGGCCT	GGGCAACGTT	CTACTCTAGC	GGGAAC T	237

(2) INFORMATION FOR SEQ ID NO: 4567:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 300 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4567:

GTTGGAGATA	GTGTAATAAT	GCCAATGAGC	CAC TCTGAAG	TTACAGCGGA	TGGGTGTTT	60
GCCAAAATTC	CATGGTGGTA	CGAAAAAGAA	AAATGGATG	GAAACAAGTT	ACTGAAAAATC	120
TGTGTAAAAA	AGCAGGGGAC	TTGGTTCTA	AAGCTAAAAC	ACAGCTCATA	ATATCAAAAA	180
GGTGCAGAGG	AAATGGTTGA	nnGGCAGCGG	ATAAATCAAG	ATGGTGCACT	TGGTTAGCGT	240
TAAATCGCGA	TGTGTGGTT	ATACACATC	CGGGAAC TAG	TAATAAGTAT	GTCAGTTTAA	300

(2) INFORMATION FOR SEQ ID NO: 4568:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 250 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4568:

ATCCCGTGGA	GGTTCAAGTC	CTCTCGGCCG	CATCAAAATT	CTTAATTTAA	ATAAGCGGGT	60
GTAGTTTAAT	GGCAAAACCT	CAGCCTTCCA	AGCTGATGTT	GTGGGTTTCA	TTCCCATCAC	120
CCGCTCCATA	GATAATTTTA	ATGAACATTG	AAACTGAAT	GACAATATGT	CAACGTTAAT	180
TCCAAAACG	TAACTATAAG	TTACAAACAT	TnATTTTAGT	ATTGATGGA	GCCTnAATCC	240
AAACATTCCA						250

(2) INFORMATION FOR SEQ ID NO: 4569:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 235 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4569:

GATCCCTAG	CTTTACGTT	AACTTTATAT	GGGTATAACT	CGAATATAAT	TTGGCGCTCT	60
ATGTCATGGG	ACAACGAGTA	GACATTTAAT	AACGGATCAG	GTTCTGGTGA	CGGTATCGAT	120
AAACCAAGTTG	TTCTGAAACA	ACCTGGTGAG	CCTGGTGAAA	TTGAACCAAT	TCCAGAGGNT	180
TCAGATTCTG	ACCCAGGTTT	AGATTCTGGG	CAGCGNTTCT	AATTCAGATA	GCGGT	235

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(2) INFORMATION FOR SEQ ID NO: 4570:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 223 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4570:

AATCTATTTC	TTCTATTGTT	AAATCGCTAT	CTCCATCTTC	TTTTATCTCT	GGTATTATTT	60
TTTCTTCAAC	TAAGTCACGA	TATAATGTTT	TTGAATTTTC	GTTCAATTTC	GATTCTGTAT	120
TTTGAATACT	TTTCTCCAC	ACAAATGTAT	ACCTATTGGC	ATTAGCCTCT	ACTTTTGTAC	180
CACCAATAAG	ATTTTGCTTT	AAACATTGAC	TATGAAACTG	GGA		223

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(2) INFORMATION FOR SEQ ID NO: 4571:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 267 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4571:

CATGATATTT	TGAACCGCAT	GGTTAAAGTT	GCAAAGACGG	TCTTGCTGTC	ACTTATAGAT	60
GGATCCGCGC	TGCATTAGCT	AGTTCTGAAG	GTAACGGCTT	ACCAAGGCAA	CGATGCATAG	120
CCGACCTTAG	AGGGTGATCG	GCCCACTGG	RACTAAGACA	CGGTCCAGAC	TCCTACGGGA	180
GGCAGCAGTA	GGGAATTTTC	CGCAATGGCG	GAAAGCTGTA	CGGCGCAACG	TCGTGTGnAG	240
TGCTGCAGGT	TCTTCGATC	GTAAAAT				267

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(2) INFORMATION FOR SEQ ID NO: 4572:

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(A) LENGTH: 221 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 4572:

10 AATrCAACTT TTACTTACTA TCTAGTTTTG AATGTATAAA TTACATTCAT ATGTCTGGTG 60  
 ACTATAGCAA GgngGTCACA CcTGTTCcCA TGCCGAACAC AGAAGTTAAG CTCCTTAGCG 120  
 TCGATGGTAG TCGAACTTAC GTTCcGCTAG AGTAGAACGT TGCCAGGCAT AATATTAAATC 180  
 15 CACAGTAGCT CAGTGGTAGA GCTATCGGCT GTTAACCGAT C 221

(2) INFORMATION FOR SEQ ID NO: 4573:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 230 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4573:

GCAGAAATGC CAGCCGCATT GAGTGAACAC AGAGTTACAG GGTATTCTGT AGCCGAACCA 60  
 30 TTCGGTGCAr TGGGGGAAAA GTTAGGCAAA GGTAAGACTT TGAACATGGS TGATGACGTT 120  
 ATACCTGATG CGTATTGCTG TGTGCTAGTA CTnAGAGGGG AATTGCTTGA TCAACACAAG 180  
 GATGTAGCGC AAGATTGTGA CAAGGTTATA AAAAGTCTGG CTTTAAATAG 230

35

(2) INFORMATION FOR SEQ ID NO: 4574:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 230 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4574:

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TCACATATCG ATAACATGAC ATAACATG CTGGGTTICC CCATTCGGAA ATCTCTGGAT 60  
 CAAAGCTTAC TTACAGCTCC CCAAGCATA TCGTCGTTAG TAACGTCCTT CATCGGCTTC 120  
 50 TAGTGCCAAG GCATCCACCG TGCGCCCTTA ATAACCTAAT CnATGTTTCC ACCATTTTTA 180  
 TAAGTCAAAG GCTCACATAC GGCTTCGTTT TCATTAnTTT AAATGGCTCA 230

(2) INFORMATION FOR SEQ ID NO: 4575:

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(A) LENGTH: 309 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4575:

10 CTTACAATAG TGTGCAAGTT GGGGTGGAGC CCGACACAG AGAAATTAGC TCCTCAATTT 60  
 CTACAGACAA TGCAAGTTGG CGGGGCCCA ACACAGAAGC TGGCGAAAAG TCAGCTTACA 120  
 ATAGTGTCGA AGTTGGGGTG GGACGACGAA ATAAATTTTG CGAAATATC ATTTCTGTCC 180  
 15 CACTCCCAA AAGACCGCAG TAGGATAATT CCATTGGAA ATACCTTACT GCCnGTTTT 240  
 AAGTAATAG CnAATATTTT GGAATTAnGT TTCCTAGTnT ACCATACCAA CTAATGGCCT 300  
 CCTTAAATT 309

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(2) INFORMATION FOR SEQ ID NO: 4576:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 240 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4576:

TGATTCTAGG AATTCAGCT TATTTAAAC TCTTTATCA CTCGGTTTTG CTGGGTAA 60  
 ATCTATATT TACTTACITA TCTAGTTTC AATGTACAAA TAATGGTGGG CCTAAGTGGA 120  
 35 CTCGAACCAC CGACCTCACG CTTATCAGGC GTGCGCTCTA ACCAGCTGAG CTATAGGCC 180  
 ATTTTTTTGA ATGTTAAATA AACATChAAA CTGnATACC ATATGTCACG GTAATCCGCA 240

40

(2) INFORMATION FOR SEQ ID NO: 4577:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 233 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4577:

50 CTTCTGTGTTA AAATTTGATG CACAATGGTC ATCATTTTTA TCTTTCCAAT AAGTACTGTC 60  
 TGGGTAaaaa ThTATTAATT GGGTGGTTCG TGAATGCAA TCTTTTTAAC GACTTCAGGG 120  
 TAATCTTTTA ACACATGCAT CGCAACGATT GAACCTnAAC TTGAACCTAA TATATAGACA 180

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(2) INFORMATION FOR SEQ ID NO: 4578:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 324 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4578:

TAGGCATACC	AAAGTCGATA	CCATAGTGAC	GACCGCCATT	AAAGTTAAGT	CCACCTGTGT	60
AACGCCCAA	CTTTGGCCAA	ATTGGATGGT	CAATAGATA	GCTTCCATCG	CCTCCGCCAC	120
CAAAATCTC	AAACCAGAT	TTACTTTGnC	TACTAATTC	TTTTTGAGCA	ATGAGTACGC	180
GCCTTAGCAA	TTTTAnGTAG	CGTAGTCCGC	TCCAAAATA	TATTAACTG	ACATACTTAT	240
TACnAGTTC	CTGGATGTGT	ACATAATCCA	CACATCGCGA	TTTATCGCTA	ACAGAGCA	300
CTTGATTACG	CGCGCTCAAC	ATTC				324

(2) INFORMATION FOR SEQ ID NO: 4579:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 229 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4579:

AATGTAAAA	CTGATTCTCA	TTAATTATTT	GATAGAAATC	ACTTTTTTGT	ATTTTATAAT	60
GTACAGCTCG	TTGCATTTCAT	ATAGCTTGAA	GTCACGTTTA	AAACCATATC	TATCATTATG	120
GTATGCATAT	CGTTTAAAAA	CTATTCTTTT	GTTAnTAGGA	CATATAAAAT	CATCATTAAAT	180
TGTCATATT	TCCAATTTTG	AGTGTA AAAA	ATGTCACTTT	TAAACTTTC		229

(2) INFORMATION FOR SEQ ID NO: 4580:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 239 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4580:

CGGGACTCn	AACCGTGTT	GACCGCCGTG	GAAGGGCGG	TGTCCTTAACC	GCCTGnACCA	60
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CTCTACCACT GAGCTACTGT GGATTAATAT TATGCTTGGC AACGTTCTAC TCTAGCGGAA 180  
CGTAAGTTTCG ACTACCATCG ACGCTAAGGA GCTTAACCTC TGTGTTCCGC ATGGGAACA 239

(2) INFORMATION FOR SEQ ID NO: 4581:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 233 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4581:

CGnACGAAT TTACACGTGT TCCGTCGTAC TCAGGATCCA CTCAGAGAGAC ACAACATTTT 60  
CGACTACAGG ATTATTACCT TCTTTGATTC ATCTTTCCAG ATGATTCGTC TAATGTCGTC 120  
CTTTGTAACCT CGGTATAGAG TGTCTACAA CCCCAACAAG CAAGCTTGTT GTnTTGGGCT 180  
CTTCCGTTT CGCTCGCCGC TACTAAGGGA ATCGAATTTT CTTTCTCTTC CTC 233

(2) INFORMATION FOR SEQ ID NO: 4582:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 218 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4582:

TTAGTAAAAA GTCTGTGAGT AAGGTTGTAT GGAAAGTGGT TAAATATTAT AGAAACATC 60  
AAAGGATGTT AAGAAATACA ATTTATTACC CAGCATTTAA TAATGGTGCT ATAGAAGGAA 120  
TTAATAATAA GATAAAATTA ATCAAGTGAA TTTCTTTTGG TTACAGAAAT TTCAnCAnC 180  
TTAAAGCACG TATAATGATG GATTTTCAGC TTGTACAA 218

(2) INFORMATION FOR SEQ ID NO: 4583:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 251 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4583:

TAATAACAT GCCATACGTA ATAAGTGGCG TTGTATTAATA ATCATCTATA ATAGCCATAT 60

AITTTTGAAT CATTGTATAA AATGGAATTA AAGTTCTAGT GATCTGTTGG GTTTTGGAAA 180  
 TAGGTCATAG GGTnAAAACn TTTTIGAGAA TTGTGCGCTA TTTGTTAAAT TGTATCCCGG 240  
 CTTGAAGTTG G 251

(2) INFORMATION FOR SEQ ID NO: 4584:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 229 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4584:

TTAGGACCG TTATAGTTAC GGCGCGGCTT TACTGGGGCT TCGATTCTGA GCTTCGCAGA 60  
 nTAACCCACT CCTCTTAACC TTCCAGCACC GGGGCAGGCG TCACCCCTAT ACATCACCTT 120  
 ACGTTTAGCA GAGACTGTGT TTTTGATAAA CAGTCGCTnG GCCTATTCAA TGGGGGCTCT 180  
 TCTGGGGGTT AAACCTAAAG AGCAACCCTT CTCCCGAAGT TACGGGGTC 229

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(2) INFORMATION FOR SEQ ID NO: 4585:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 218 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4585:

TTATAAAAG AITTAACGC GTTATTAATC TTGTAGTGT TCTTTCGAAC ATAGCGATTA 60  
 TTCTTTATGA ATTCAAGCTT AITTAACACT CTTTATTCAC TCGGTTTTCG TTGGTAAAT 120  
 CTATATTAC TTAATTATCT AGTTTTCAT GTACAATTnC TTTTATGTCA AGCGCTCGCA 180  
 TACTGCTnTA TTTTCAAAA ATCAATGCT CATTTACA 218

45

(2) INFORMATION FOR SEQ ID NO: 4586:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 241 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: double
  - (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4586:

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GGAATTCAC TTTCTCTTC TGCACTCAAG TTTTCCAGTT TCCAATGACC CTCCACGGTT 120  
 GAnCCGGGGC TTTTACATC AGACTTAAAA AACCGCCTAC GCGCGTTGT ACGCCCAATA 180  
 5 ATTCGGGATA ACGCTTGCCA CTTACGTATT TACCGCGGGC TGCTGGCACG TATTnAGCCG 240  
 T 241

10 (2) INFORMATION FOR SEQ ID NO: 4587:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 253 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4587:  
 20 CAGCCACCTG TTGCCACCAG CTACACTTGC ATTGTTTGCT ACGACACGCC CAAACAATGC 60  
 TGAAGTGAAT AAGAAATCAA TCATTGCTC TTCTGTTAAA TCATGTGTTT TTTCTAATT 120  
 AAAAAATGCA CCGGAATGG TACCGAGGA ACCAGCTGTT GGCGTTGCAC AAATAATACC 180  
 25 CATCGCAGCA TTGACTTCAT TGTGCAAGG CACChTIGAC TCGGCAATC ATTCATATCC 240  
 GACnAAGCAG ATG 253

30 (2) INFORMATION FOR SEQ ID NO: 4588:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 218 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 35 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4588:  
 40 ATGAAACGGGT GGTAGCGAGT GGACGAAAAA CATCAATGAA AAGCTAGCTG TAGTTGCAAG 60  
 AGAAACTGGC TTAGATGGC ATTGGATCAA CACATGCGGC ATTGAGAAAT CCACGCATGG 120  
 45 CTGACAGCTT TACGATTGCG CGAAAAATGA ATCCTGAAGG CATTTTAGCA ATGTGTGTC 180  
 GGACGTACCA GTAGAAAAGG CTTTGAAGC AGTTGAAT 218

(2) INFORMATION FOR SEQ ID NO: 4589:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 216 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 55 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4589:

5 GCCATGGCTC CACAGGTAGG ACTCGAACCT ACGACCGATC GGTAAACAGC CGATAGCTCT 60  
 ACCACTGAGC TACTGTGGAT TAATATTATG CCTGGCAACG TTCTACTCTA nCGGAACGTA 120  
 AGTTCGACTA CCATCGACGC TAAGGAGCTT AACTTCTGTG TTCGGCATGG GAACAGGTGT 180  
 10 GACCTCCTTG CTATAGTCAC CAGACATATG nATGTA 216

(2) INFORMATION FOR SEQ ID NO: 4590:

(i) SEQUENCE CHARACTERISTICS:

15 (A) LENGTH: 234 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4590:

20 AGATTAAAT AATCAAAAGT GCACATTATT AAAATATCAA TTTCACACTC AATGCGGCTC 60  
 ATCnCATTCa TTTCCTGTCT AGCAACGTTT TACTCTAGCG GAACGTAAGT TAGCTACCAT 120  
 25 CCTCGGCTAA GAACCTTTCT TGACTTGTGA CAATCGGCTT GCTTCTTTCC TCTCCTTCGG 180  
 CTCTCGCTAC TCAATTTAGC TCTACTAAAC TCGGTTGCGG CTCTTTTCTn GTTT 234

(2) INFORMATION FOR SEQ ID NO: 4591:

(i) SEQUENCE CHARACTERISTICS:

30 (A) LENGTH: 216 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 35 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4591:

40 AATTGACTGA CTTCTTTTTC CCGCGTGTIT AATATTGTIA TACATATATT CTAATTGCAC 60  
 ATTTAAACTT CGTAAATGCC AATGTGnGTG GGACAGAAAT GATATTTTCG CAAAATTTAT 120  
 45 TTCTGCTGCC CACCCCAACT TnGCACATTA TTGTAACTCG ACTTTCGCGC AGCTTCTATG 180  
 TTGGGGCCCC GCCAACTTGC ACATTATTGT AAGCTG 216

(2) INFORMATION FOR SEQ ID NO: 4592:

(i) SEQUENCE CHARACTERISTICS:

50 (A) LENGTH: 216 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4592:

ATTCCGGATA ACGCTTGCCA CCTACGTATT ACCGCGGCTG CTGGCACGTn TTAGCCGTGG 60  
 CTTTCTGATT AGGTACCGTC AAGATGTGCA CAGTTACTTA CACATATGTT TTCCCTAAT 120  
 AACAGAGTTT TAGGATCCGA AGACCTTCAT CACTCACGCG GCGnTGCTCC GTCAGGCTTT 180  
 CGCCATTGCG GAAGATTCCC TACTGCTGCC TCCCGG 216

(2) INFORMATION FOR SEQ ID NO: 4593:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 228 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4593:

TTGGACTAGA ACCAATGAAG GACGTTACTA ACGACGATAT GCITAAAGGA GCTGTAAGTA 60  
 AGCTTTGATC CAGAGATTTC CGAATGGGGA AACCAGCAT GAGTTATGTC ATGTTATCGA 120  
 TATGTGAATA CATAGCATAT CAGAGGCGAC ACCCGGAGAA CTGAAACATC TTAGTACCCn 180  
 GTGGAAGAGA AAGAAAATTC GATTCCCTTA GTAGCGGCGA GCAGAACG 228

(2) INFORMATION FOR SEQ ID NO: 4594:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 252 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4594:

CAATCGTTGA AGSAAATGTA CCAGCAGCAA TCAAAGACAA AGAAATTATT TCTGTAGACA 60  
 TTTCATCATT AGAAGCTGGA ACGCAATATC GTGGTGCTTT TGAAGAAAAAT ATTCAAAAAT 120  
 TAATCGAAGG TGTTAAATCT TCACAAAATG CCGTACTATT CTITGATGAA ATCCATCAAA 180  
 TTATCGGTTT AGGTGCCACA GAAAGTGGAT TCCAGGTTAG CCAAAGGGGT TAATCTGGAT 240  
 TAATTTTTTT Tn 252

(2) INFORMATION FOR SEQ ID NO: 4595:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 258 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4595:

5 ACTCTCTAGT GACCGATAGT GAACAGTAC CGTGAGGAGA AGGTGAAAAG CACCCCGGAA 60  
 GGAGnTGAAA TAGAACCTGA AACCGTGTGC TTACAAGTAG TCAGAGCCCG TTAATGGGTG 120  
 10 ATGGCGTGCC TTTTGTAGAA TGAACCGGCG AGTTACGATT TGATGCAAGG TTAAGCAGTA 180  
 AATGTGGAGC CGTAGCAGAA GCACGGTTCT GGAATAGGGG CGTTTGTAGT ATTTTGGGTG 240  
 GTTACCCGGG AGnAAAGG 258

(2) INFORMATION FOR SEQ ID NO: 4596:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 229 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4596:

25 CCTACCGCTG CAGCCGCTGG ATCTGCTGGA GTTGCAATAG GATCTGCCGG TGCCGCACGT 60  
 CTATTTCTCT TTTTCGGTCT ATTAGATGCT GGTTCAAGCA TTGCAACTAG CTCTGGTTTA 120  
 30 TTTGAAGAAT GACGAACATC TTCTTGAATT TCCTTTAAAG TAGATGTCCT CCTGAAGCAT 180  
 TnCATTTGTT AGTTGGGTAC ATTAATGcGn TATTATCGAC ACTACATCA 229

(2) INFORMATION FOR SEQ ID NO: 4597:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 246 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4597:

45 GCTCACCTTA GAATTCATC CTGCACTCA CTGGTGGTC GGTTTGGCGG GTAGGGTCAC 60  
 CTATTTTCTA TCTAGCAGGC TTTTCTCGGC AGTGTGAAAT CAACGACTCG AAGnCACAAAT 120  
 GGTCTTCTCC CCATCAGCAG TCAGCCCTTAA CGAGTACCGG ATTGCTCTAA TACTCAGCCT 180  
 50 TACTGCTTAG ACGTGCAATC CAATCGCAGC CTTCGCTTAT CCTACTGnGG TCCCCCATC 240  
 GATTAA 246

(2) INFORMATION FOR SEQ ID NO: 4598:

(A) LENGTH: 223 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4598:

10 AAGAAAATAA AGATGCTAC AATTACGATT GCAATCAAAC CAAAGAACCA TAATGATGTG 60  
 TACCAAGTGC TGCACCTTTA GTAATGACAA CGTTTAAACT TAGCAACATA ACTACTAGAA 120  
 CAATTAGCCC TGCAACGTCA AATTATGTG TATTGGTAAT TTCTGATTTC GTTTCAGGCG 180  
 15 TCCCTTTGAT GAGTAGCATT GAAAGTACGG nAACGATGnG TTG 223

(2) INFORMATION FOR SEQ ID NO: 4599:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 219 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4599:

nTnTCACTGT TTGACCGGT ACCGTGTCAG ATAATCCCGC ACGCAATGCA ATCGTTCGTG 60  
 30 CAATGTTTTG GCCTTGTAAT CCTTCTGGAA AAGCCGTACC AACAAATGACA TCTTCAATCA 120  
 TATTCTTATT GAATTTTCGG TCAATACGTT TCAATACGCC TTGTAATACT TTGGCTGCGA 180  
 CATCATCAGG TCTTTCGTGG AATAATGCGC CTGCTTTGC 219

(2) INFORMATION FOR SEQ ID NO: 4600:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 208 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4600:

AAGGTTAAGA GGAGTGTTA GCTTCTGCGA ATACCGAATC GAAkCCCCAG TAAACGGCGG 60  
 CCGTAACAT AAGGTCCTA AGGTAGCGAA ATTCTTGTC GGGTAAGTTC CGACCCGCAC 120  
 50 GAAAGGCGTA ACGATTGGG CACTGTCTCA ACGAGAGACT CGGTGAAAAA CATAGTACCT 180  
 GTGAAGATGC AGGTTACCGC CGGACAGG 208

(2) INFORMATION FOR SEQ ID NO: 4601:

55

(A) LENGTH: 286 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4601:

10 AGTGCCAGTG ATTAAGTCGA TTTTCAATA GATCAGGGAA GACTACCAAG CTTATGTTGA 60  
 AGGACATCTT TTGGCGTTAC CGGTTGGGCA GGTATGTTGT ATTACCGTTC ACAACAGCAT 120  
 CACTTGAACA ACATTGTTTA ACGGATTATT TGGCAATTGC TTATTGTCGA ACANTGCnAG 180  
 15 TTGGTGAGAT TTAATCATCG CTAAGATGT GAAATAGATC GAAATGGTT TAAGCAAACG 240  
 TTGCTCAGGT GTTACTACGT GATATGCCTA GCGAGTATAC TACAAC 286

(2) INFORMATION FOR SEQ ID NO: 4602:

20

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 264 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4602:

30 ATATGGCTAT GGTATTACA TATCGATnAA CATGGACATA ACTCATGCTG GGTTTCCCCA 60  
 TTCGGGAAAT CTCTGGGATC AAAGCTTACT TACAGTCCC CAAAGCATAT CGTCGTTAGT 120  
 AACGTCTTC ATGGCTTCTA GTGCCAGGCA TCCACGTGC GGCCTTAATA ACTTAATCTA 180  
 35 TGGTTCACC CATTTTATA GGTCAAACGG TAACATGAGG TAGGTCTTT TATAAAAAGG 240  
 nTTAAACGGG GTATTATCT TGTG 264

(2) INFORMATION FOR SEQ ID NO: 4603:

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(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 246 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4603:

50 GAAACGTTAG CACAAGCCAT GAACCAATTA GGTGGAAGA GTAATAGTGG TGAAGGTGGC 60  
 GAAGATGCAA AACCGTTATG AAGTACAAGT TGATGGAAGC AACAAAGTAA GTGCGATTAA 120  
 55 ACAAGTTGCT TCTGGCGGTT TTGGTGTnAC TAGTGATTAT TTACAACATG CCAAAGAATT 180

TATCCn

246

## (2) INFORMATION FOR SEQ ID NO: 4604:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 248 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4604:

ATTAACIAAC ATGGGCATCT ACGATGGAAA CAGACGTGGT ATCCTCGCTA TTATCCAGCT 60  
 AnCGCCATGC TGGCTCGTTT TTCAAATCAA GCCATTTTAA ATTTTGGAAA GGTGTATGGA 120  
 CCAAGCCCTA TGACATTGCA TTCACCGATT GAACACGATG TTATCGCCAT GTCTCATGGA 180  
 GAAATCAAG AGCATCATTC AGCAGTATCG CGATGCTACA TTACGCGCGA TTAAGCAGn 240  
 TTTGATGG 248

## (2) INFORMATION FOR SEQ ID NO: 4605:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 246 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4605:

CAAGTTTTC AGTTTCCAAT GACCTCCAC GGTGAGCCG GGACTTnTCA CATCAGACTT 60  
 AAAAAACCGC CTACGCGCGC TTACGCCCA ATAAITCCGG ATAACGCTTG CCACCTACGT 120  
 ATTACCGCGG CTGCTGGCAC GTATTAGCCG TGGCTTCTG ATTAGGTACC GTCAAGATGT 180  
 GCACAGITAC TTAACATG ATGTICTTCC CCTAAATGAA CAGAGTTTTG TTTTGTnTTn 240  
 TGGGTT 246

## (2) INFORMATION FOR SEQ ID NO: 4606:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 212 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4606:

TGTATCTGCA GTTAAATCAT GThTGGCTTG GTTTAATGCT GTTAATGCGT TATCGACACG 120  
 ATGTTTTTCA TCTGAAATTT GTTGTGCAGT TGCATCGCCA TTGTCAATAA CACGTTGAGC 180  
 5 TGCAGTTATT TCACTTTCTG CTTCACGCTh CT 212

(2) INFORMATION FOR SEQ ID NO: 4607:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 266 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4607:

TAGTCAAGAT GAGAATTCTA AGGTGAGCGA GCGAACTCTC GTTAAGGAAC TCGGCAAAAT 60  
 20 GACCCCGTAA CTTCGGGAGA GGGGTGCTCT TTAGGGTTAA CGCCGAGAAG AGCCGCATGA 120  
 ATAGGCCCAA GCGACTGTTT ATCAAAAACA CAGGTCTCTG CTAAACCCTA AGGAnTGTAT 180  
 AGGGGCTGAC GCCTGCCCGG TGCTGGAAGG TTAAGAGGAG TGGTTAGCTT CTGCGAGTAC 240  
 25 GGAATCGAAG CCCAGTAAA CGGCGG 266

(2) INFORMATION FOR SEQ ID NO: 4608:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 215 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4608:

TTCAGTACGT AATACGCAC GTGAAAAAGG TGTTAnATTa AAGCAGITTC TGGATCTGGT 60  
 40 AAAAATGGTC GTATTACAAA AGAAGATGTA GATGCATACT TAAATGGTGG TGCACCAACA 120  
 GCTTCAAATG AATCAGCTGC TTCACTGACA AGTGAAGAAG TTGCTGAAAC TCCTGCAGCA 180  
 CCTGCAnCAG TGAACATTAG AAGGCGACTT CCCAG 215

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(2) INFORMATION FOR SEQ ID NO: 4609:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 241 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

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GGTTTCATAC ATGTCAATAG TAACCGTCTT AACTTGTGT CGATTTTITA AATCGAATCG 60  
 CTCGAAATAG GCACGCAAGA ATCTGTAGT TCTATTTTCT AAAATATCTA TAACATCATG 120  
 GTATCATTAT CTATAAAAT GAAACTCATT GATCCAGTTA CATTTTAAAC GCTTTTAAAT 180  
 TCATCCATAG CGATGTGGTT CCGCCAACC ATTAAGGGG TTAATTCnGA ATnGATTAGC 240  
 C 241

(2) INFORMATION FOR SEQ ID NO: 4610:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 215 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4610:

ATTCATTCTT TGCTAGCAA CGTTCTACTC TAGCGGAACG TAAGTTAGCT ACCATCCTCG 60  
 CTAAGAACCT TTCTTGACTT GTGACAAATCG CTGCTCTCTT TCCTCTCCTT CGGCTCTCGC 120  
 TTACTCATT AGCTCTACTA AACTCGTTGC GCTCTTTTCT CGTTTCGTCA GATTCAAACG 180  
 TTTCAnTTTC CCAAGCCATT TTCTTTTGGT GnTTA 215

(2) INFORMATION FOR SEQ ID NO: 4611:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4611:

GTGCCATCTT TCTTCATCAA TTCATTAATA ATTGCTGGGA CGCCACCAGC TTCATGCACA 60  
 TCATGCATTG AATACGATGA ACTAGGTGCT ATTTTIGATA AATATGGCGT GCGTTTGCCA 120  
 ATAGCATTAA TGCCTCTTAA GTCATAATCA ATACCAGCTT CATTGGCAAT GGCTAACGTA 180  
 TGCAGTACCG TGTITGTGTA ACCACGGCAC ATCTTCGCCA ATTCTTCTT TAAACAAGTT 240  
 TAAATTATCT TGTGATTCAG GTAATCCAT CTGTITAGCT ACTACGATT GAGGTCTATC 300  
 TTCTAAACGT TGCTGTACG GCGGCTAATT CTGGATTAAT GACTTTATA TCTTCAATAG 360  
 GGTCTCTACC TTCAGAACCG CTCATATCC ATCTGTGGA 400

(2) INFORMATION FOR SEQ ID NO: 4612:

(A) LENGTH: 258 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4612:

10 AATACTATTA AGAAGTCCTG AAAAATTCAC ATTAGCAGTT GGATTGTTCA ACTTTATTAA 60  
 TGATAAGTAT GCAAAATAATT TCACAGTGTT TGCAGCAGGG GCAATTATGA TTGCAGTACC 120  
 TATAGCAATC GTATTCTTGT TCTTGCAACG CTATTTAGTA TCAGGTTTAA CAACAGGTGC 180  
 15 CGACCAAAGG GTTAGTTTGA ATTTAGGAGT GGGGCCAGAT TGGTTAAGGA CCnCTAATG 240  
 ACCGTTAAGG TThAAAGG 258

(2) INFORMATION FOR SEQ ID NO: 4613:

20

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 210 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4613:

30 GACTTCGTTT CAGTGTA AAA TTTTCTAAT GTAACAGATA TGCTATTATT CATTGGAATG 60  
 ATTAGTGCTT CATCTTTTTT ACCCCAATAT TTTATAAGTG CAATTCGTAT GTGCACGTGC 120  
 TTTGCCACTT TTAATCAACG CTAACTCTCC TAAATTCTCA ATCCAAGTAT GTGCTGCACC 180  
 35 AGCTTTTTTC TACAGCTTTT ACAATATTnn 210

(2) INFORMATION FOR SEQ ID NO: 4614:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 235 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4614:

TAGCGTATTA ATCGGCGGAT CGGCTGAGCG TATCTGAGTC TGAATCGCTG TCTGAGTCTG 60  
 50 AGTCGTATCC GAGTCTGAGT CGCTGTCTGA nCTGAATCA CTGTCTGAAT CCGnATCGCT 120  
 ATCTGAATCT GAATCGCTAT CCGAGTCTGA GTCGTGTCT GAATCTGAAT CGCTGTCTGA 180  
 GTCCGAATCG CTATCTGAAT CTGAGTCGCT GTCTGAGTCT GAATCGCTAT CTGAA 235

55

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 209 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4615:

ATGTGCGTGT	TTTATTTTAA	TAGGTTAGTA	ATATATTAGG	TCATGTTATG	TTTAAATTTA	60
TAATGAATAA	ATAATTTAGA	AATATGCTTC	CGATTGTTTG	ATGCTTTAAT	TCAGTTAGAA	120
GCATCATAGA	ATGCATGATT	ACTGTTGTAA	AGATACGTAA	TGTTTGTAT	TGACTGTATG	180
TCTTTGGATA	GAGTTACAAA	CTTATTTTG				209

(2) INFORMATION FOR SEQ ID NO: 4616:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 222 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4616:

ATGCGCAAGA	TATGGAGAAC	ACCATCGCGA	AGCGACTTTC	TGGTCTGTAA	CTGACGCTGA	60
TGTGCGAaAC	NTGGGGATCA	AACAGGATTA	GATACCCCTGG	TAGTCCACGC	CGTAAACGAT	120
GAGTGCTAAG	TGTTAGGGGG	TTTCCGCCCC	TTAGTGCTGC	AGCTAACGCA	TTAAGCACTC	180
CGCCTGGGGA	GTACGACCGC	AAGTTGGAAA	CTCAAAGGAA	TT		222

(2) INFORMATION FOR SEQ ID NO: 4617:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 258 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4617:

CAGTTTGCAA	CACCCCAATT	CTTGCCAGTC	AGCATGATTC	TGTTCAATTTC	TGCGATTTCCT	60
TGTCGATAT	TTTCAAATCT	TGTTGGACTT	GATCTAAATC	AATTGGTGCT	TCTTCTTCGA	120
ATGTATCAAC	ATATCGCGGT	ATGTTTAAGT	TGTAATCGTT	ATCGGnGATC	TCTTGTAATG	180
TGCGCGTGTG	GCTATATTTA	TCAATCGTGG	CTTTACGCTT	ATATGGGGCT	ATAATACGTT	240

## (2) INFORMATION FOR SEQ ID NO: 4618:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 216 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4618:

TCTAATTGAT AGTGAATATA ATTAGAGTTn GAGGCTGGGA CATAAATCCC TAAATTTCAn 60  
 CAGTAAGATA ATTTTCAATT AGAAAAATATC TTACTGCTGT TCTCTATTTA TACAATACTT 120  
 CATTGGAATG GCTTCGCTTT CCTAGGGTGC CGTCTCAGCC TCGGTCCTCG ACTGGGCACT 180  
 GCTCCCTCAG GGGTCTCGCC ATTTAATACT ACGTAT 216

## (2) INFORMATION FOR SEQ ID NO: 4619:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 238 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4619:

ATGTATCGCG CCGAGCAACA CAAGATAAGC ATTGTAGATG TGGATGCGCTT AACTGGGCAA 60  
 GCGATTnGTC GTCCCTAAAAC AGGTACATAT GCGCTATCTG ACCTAGTCGG TTTAGATATT 120  
 GCAGTGTCTG TAATTAAAGG CATGCAACAA GTACCTGAAG AAACACCCnT ATTTTCATGA 180  
 TGGTCAAAAT TTGTAATAC GTTGTTTTGA CAATGGGCGC ACCTCGGACC GTAAAAACG 238

## (2) INFORMATION FOR SEQ ID NO: 4620:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 249 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4620:

AACCATTGAA GCACCCCAAT ACGTTTTGGC TGACACGnAC GTATATCGCC TGCCCAAGCA 60  
 GATGAGCCCT TATTAACACC TGAACCACTT CGAAGGCCAC TACCTTTAAG TGACTTCAAC 120  
 CATTTTTCCT GGATCTTTAG CTGTATGCAT TGCCCTGGAT GCGACCCTTG nCATCAATTG 180

TTGACCAGC

249

(2) INFORMATION FOR SEQ ID NO: 4621:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 267 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4621:

TGGACCTGTA AAAGGAGACT CGATTGTAGA AAAAGAAGAA ATTCCATTCA AGAAAAGACG 60  
 TAAATTTAAT CCTGATTAG CACCAGGGAC AGAAAAAGTA ACAAGAGAAG GACAAAAAGG 120  
 TGAGAAACA ATAACGACGC CAACACTAAA AAATCCATTA ACTGGAGAAA TTATTAGTAA 180  
 AGGTGAATCG AAGAGAAATC ACAAAGTCCG TTTTGGNTTA CAGGTACGGC AGAACGATAC 240  
 ACAGTCTCGG GCGATTGTGC AGTCCAC 267

(2) INFORMATION FOR SEQ ID NO: 4622:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 231 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4622:

CAAAAGGTAG TTAAATTAG GAGTGGGGAA ATGATAAGA CCACTAATGA CGATAAAGAT 60  
 TAAAGGAGAG ACGTTATGAT GACGATTAAA GTTGGATCAT TGGGTGTGGT GGTATTCCAA 120  
 TGGCAAGCAC ATGCCAAGTT TACAAAAAGT TGAATGTTG AAATGAGCGC ATTTTGTGAC 180  
 GTAGACATTT CGAAGCAGCG AGTGCGGCAG AAGCATACGG ACTGACAATG C 231

(2) INFORMATION FOR SEQ ID NO: 4623:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 301 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4623:

CGAAACCGCG CGACCCGGA CCAACCGAG GAAAGTACC CnAAAGnTGA AGCCCCGGAA 60

CCCAACACCC ACCCGGACAC CAGAAGTGCC GGAGTGAGCC AGAAACTCCA ACACCGCCAA 180  
 CACCAGAGGT ACCAGCTGAA CCTGGTAAAC CAGTACCACC TGCCAAAGAA GAACCTAAAA 240  
 AGCCTTCTAA ACCAGTGGAA CAAGGTAAAG TAGTAACACC TGTATTGAA ATCAATGAAA 300  
 A 301

(2) INFORMATION FOR SEQ ID NO: 4624:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 222 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4624:

CGAGGTGCTG CAGAAGGTG CATTCGTCG TATTTAATTG AAGAAAAGAA CTACTTAGAA 60  
 GCTGTGATTG GTTTGGCAGC GAATATTTTC TATGGGACAA GTATTCCAAC ATGTATTTTA 120  
 GTATTTAAAA AATGTCGCCA ACAAGACGAC AACGTACTAT TTATCGATGC ATCCAATGGT 180  
 TTTGAAAAAG GGGhAAATCA TAATCATThG GCGATGCCCA AG 222

(2) INFORMATION FOR SEQ ID NO: 4625:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 301 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4625:

TGGAAGTGA ATCAAGAGG TAATATCCGT AGTCGAAATG TTGCTCTCT TGAGTGGATC 60  
 CTGAGTACGA CGGAGCACGT GAAATTCGGT CGGAATCTGG GAGGACCATC TCCTAAGGCT 120  
 AAATACTCTC TAGTGACCGA TAGTGAACCC AGTACCGTGA GGGAAAGGTG AAAAGCACCC 180  
 CCGGAAGGGG AAGTGAAATT AGGAACCCGT AAAACCCGTG TGCTTTACCA AAGTTAnGTT 240  
 CAAGAGGCCC CGTTTAAATT GGGGThnAAT TGGCGGTGCC CTTTTTGGT AGGAATTGAA 300  
 A 301

(2) INFORMATION FOR SEQ ID NO: 4626:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 223 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4626:

5 GAATGAAGGA AGACCATATG AAAAATGGCC AACTTAAGCC AGGATACAAT TTACAAATAG 60  
CGACAAATTC TCAATTTGTT TTATCCTATG ACCTATTTCA AAACCCAACA GATACTAGAA 120  
10 CATTAAATCCC ATTTTTTaaCA ATGATTCAAA ATACCTTCGG TTATTTACCA GAGTATATTG 180  
TAGCTGATGC AGGTATTGGT AGTGAGCAA ACTATATGGC nAT 223

(2) INFORMATION FOR SEQ ID NO: 4627:

15 (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 221 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4627:

25 TTGTTGGGC CCGCCnGGC nCATTGGCTG TAGAATTTCT TTTGAAAT CTCTGTGTTG 60  
GGGCCCCGA CTAGAATTGA AAAAAGCTTA TTACAAGCGC ATTTTCGTTT AGTCAATTAC 120  
TGCCAAATATA ACTTCGTAGA TCATAGAACA TTGATTTATT TCCAGCCTA TTCCTTTTAT 180  
30 AAAAAAAGA CGGATTAATT ATCGCTTTT TCCTTATATC T 221

(2) INFORMATION FOR SEQ ID NO: 4628:

35 (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 208 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

40 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4628:

ATATATTCGT ATTTATAGTA AAATTAAATA AAGAGnATTA TATAACAGA GGTGTAGTAA 60  
45 GTATGAAATT TGAGnAAATA TATAGATCAC ACTTTATTGG AAGCCTGAGT CAACAGTAC 120  
GCAATCGAT CAATCATCG ATGAAGCGAA GCATACCAAT TTTAAATCTG TATGTGTGAA 180  
TCCACCACAT GTTAAATATG CAGCAGAG 208

50 (2) INFORMATION FOR SEQ ID NO: 4629:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 305 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4629:

5 ACAATAATGC ATCATAATGC GCAACAACAA TCAATACTGC GAAAACAGAA GCACAACAAG 60  
 TGATTAATAA TGAGCGTGCA CACCACAACA AGTTTCTGAC GCACTAACTA AAGTTCGTGC 120  
 ACACAACATA GATTGATCAG CTAAGCTTA CTTCAAAATA AAGAGATATA GCCATTAGTA 180  
 10 ACGTTAAAAA AACTTACAAG nTCTGTGACC AGTACCTCAC TGTGGTATGA CGCACAAGTA 240  
 TTGATACTnT ATCGAGAGCG TGAGnGAAC GAATACTGCG CTCACGGTAT TACATGCGTG 300  
 CACTG 305

## 15 (2) INFORMATION FOR SEQ ID NO: 4630:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 213 base pairs  
 (B) TYPE: nucleic acid  
 20 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## 25 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4630:

TCGACTACCA TCGACGCTAA GGAGCTTAAC TTCTGTGTTT GGCATGGGAA CAGTGTGACT 60  
 CCTTGTGATA GTCACCAGAC ATATGAATGT AATTATACAT TCCAACTAG ATAGTAAGTA 120  
 30 AAAGTGATTT GCTTCGCCAA ACATTTATTT TGATTAAGTC TTCGATCGAT TAGTATTCGT 180  
 CAGTCCACA TGTACCATG CTTCAnCTn GAA 213

## (2) INFORMATION FOR SEQ ID NO: 4631:

- 35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 213 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 40 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4631:

45 GAnGTGAAT AGAACCTGAA ACGTGCTGCT TACAAGTAGT CAGAGCCCGT TAATGGGTGA 60  
 TGGCGTGCTT TTTGTAGAAT GAACCGCGCA GTTACGATTT GATGCAAGGT TAAGCAGTAA 120  
 ATGTGGAGCC GTAGCAAAA CnAAGTTCTG AATAGGCGCT TTAGTATTGT GTCGTAGCCG 180  
 50 GAAACCAAGT GATCTACCTT TGGTCAAGTT GAA 213

## (2) INFORMATION FOR SEQ ID NO: 4632:

55



(A) LENGTH: 205 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4632:

10 GCTTTTAAAT CAAATGATAG CGGAAGGGnA TTTTAAATTT ATTGGAACCA TTATTTACAG 60  
 CAGCAGATGG ATGGATTGGT GTCACAATTA TCTTGGTGC CTTTGCATTA TTCTGGTTTG 120  
 TAGGTATTCA TGGTCCGTCA ATTGTAGAGC CAGCAATTGC AGCCATTACA TATGCGAATA 180  
 15 TCGAAGCGAA CTTCAGTTG CTCA 205

(2) INFORMATION FOR SEQ ID NO: 4633:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 204 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4633:

AGTTATATTG ACAGTAGTTG ATGGGGCCCC AACATAGAGA AATTGGAACA CCAATTTCTA 60  
 30 CAGACAATGC AAGTTGGGGT GGGCTCTAAC ATAAAGAAAT ACTTTTCTn TAGAAATTAG 120  
 TATTTCTTAT ACATGGGTTT TACTCAGTAT TTCCTATTCT TAAGTGCACA TTAGCAGCGG 180  
 CTAATGTGTT AAGAACTACT ACAT 204

35

(2) INFORMATION FOR SEQ ID NO: 4634:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 226 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4634:

45 GCCGATGGAT TAGAGTATAT GACGTGGTGG CATGTCATTA ATTTAGGTGA TGAGGTAAAG 60  
 AACGTTnGGG CAAGGTATGA GTGGTGGTAT TGGGTTACGT TAGCCCGTCT GATGTAGAAG 120  
 50 CTTTGTGTTA AATAATCAA CTAGATACGC TTTGTTTAC AAAGATTAAA CACCAAGAAG 180  
 AAAAAGCATT CATTAAAGCAA ATGCTGGAAG AnCATGTGT CACACA 226

55

(2) INFORMATION FOR SEQ ID NO: 4635:

(A) LENGTH: 208 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4635:

10 CATATAGTTT TGCTCACTAC CATAACCTGC ATCAGCTACA ATATACTCTG GTAAATAACC 60  
 GAAGAGTTGT TGAATCATTG TTAATAATGG GATTAATGTT CTAGTATCTG TTGGGTTTTG 120  
 AAATAGGTCA TAGGATAnAA CnGTACGGAG AATTGTGCGC TATTGTAAaA TTGTATCCTG 180  
 15 GCTTAAGTTG GCCATTTTTC ATATGGTC 208

(2) INFORMATION FOR SEQ ID NO: 4636:

(i) SEQUENCE CHARACTERISTICS:

20 (A) LENGTH: 228 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4636:

TTTTTCTTGG TGTTTATTTT TATTTTGAAC GTTTTAGGAC ATAAAAAaAA GTAGACCTTG 60  
 30 CGGTCTCAAT GCGGCTCATC GCATCCATTG TTTGCTTGGC AACGTTCTAC TCTAGCGGAA 120  
 CGTAAGTTGG CTACCATCGA CGCTAAGAAC CTTTCTTGAC TTGTGACAAT CGCTTGCTTC 180  
 TTTCCGCTTC TTCTGCTCGn GCTTACTCAT TGAGCnCTAC TAAACTCG 228

35

(2) INFORMATION FOR SEQ ID NO: 4637:

(i) SEQUENCE CHARACTERISTICS:

40 (A) LENGTH: 212 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4637:

CATGGTTCAA AAGTGAAGA CGGTCTTGCT GTCACCTATA GATGGATCCG CGTGCATTA 60  
 GCTAGTTGGT AAGGTAACGG CTTACCAAGG CAACGATGCA TAGCCGnCCT GAGAGGGTGA 120  
 50 TCGGCCACAC TGGAGCTGAG ACACGGTCCA GACTGCTACG GGAGGCAGCA GTAGGGnATC 180  
 TTCCGCAATT GGCGAAAGCT GTACGGGCAA CG 212

55

(2) INFORMATION FOR SEQ ID NO: 4638:

(A) LENGTH: 256 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4638:

10	ATnTrATTAA ATAGAGAACA GCAGTAAGAT ATTTTCTAAT TGAAAATTAT CTTACTGCTG	60
	TTTTTTAGGG ATTTATGTCC CAGCCATTTT TGTATTGATA TTAAATTTTC GATAATTTTT	120
	CAGGAAGCAT TTTAATTTTA CTAATGAAGC CATATTTTGA GATTAACCAA AATTAATATT	180
15	TACATTTCCT AACCATTTTT ATGTAACATT TACAGTTCCA AAAATGGGGG TAATAATCCA	240
	GGTTAGGATA AAGAGG	256

(2) INFORMATION FOR SEQ ID NO: 4639:

20

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 209 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4639:

30	AnAGnAACCA CTACATAATA AATCATTAGT GGCTCTTTAT CATTCTGTC CACTCCCT	60
	GAGAAGTTTA AAATTTTATA TGTGGCTTG TTATGTTAAG GGAATTAACA TGGTTGCTT	120
	GTTTATATTA TGTGATTCCA ACATTACTAG TCCTGGTAAA TCTAATCCG TAAATGCTA	180
35	AATCTAACCA TCTATTAAAT TTTAAACC	209

(2) INFORMATION FOR SEQ ID NO: 4640:

40

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 224 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4640:

	nGnAAAGGTG AAAAGCACCC CGGAAGGGAG GTGAAATAGA ACCTGAAACC GTGTGCTTAC	60
50	AAGTAGTCAG AGCCCGTTAA TGGGTGATGG CGTGCCTTTT GTAGAATGAA CCGCGAGTT	120
	ACGATTTGAT GCAAGTTAAG CAGTAAATGT GGAGCCGTAG CAGAAGCATG GTCTGAATAG	180
55	GTGCGTTTAG TATTGTGTCG TAGCCCGCAG AACCAGGGTG ATCT	224

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 205 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4641:

CACTCACnCA GATTTTTTAAG TCCTGTGCGT CTGCCAGTTC CGCCACCCCG GCACTATAAA	60
AATGGAGCAG AAGACGGGAT TCGAACCCGC GACCCCAACC TTGGCAAGGT TTTATTCTAC	120
CGCTGAACATA CTCTGTCATA TCGGGGTGAA GGGAGTCGAA CCCCCAGCC GTAAGCTAnG	180
ATCCTAAGTC TAGTSCGTCT GCCAA	205

(2) INFORMATION FOR SEQ ID NO: 4642:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 235 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4642:

AGCTGACATG ATCAGTCAGC TTACAACAAT GTGCCGGTTG GGGTGGCTGG ACACGGCACC	60
CTGAGGGGAAG GGCACCCGTC ATCAAAAATT CTATTATAG AATTTTACAG TAATGTGACA	120
GACGGGCAAA GCGAACCAAT CAATACGAAG TATTGTATAA ATAGAGAACA GCAGTAAGAT	180
ATTTTCTAAT TGAAAATAT CTTACTGCTG TnTTTTTAGG GATTATGTr CCCAG	235

(2) INFORMATION FOR SEQ ID NO: 4643:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 260 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4643:

AGnAAGGTGG GGATGACGTC AAATCATCAT GCCCCTTATG ATTTGGCTAC ACACGTGCTA	60
CAATGGACAA TACAAAGCA GCGAAACCGC TAGTCAAGCA AATCCCAATA ATTGTTCTCA	120
GTTCTGATTGT AGTCTGCGAC TCGACTACAT GAAGCTGAA TCGCTATAAT CTAGATCAGC	180
ATGTACTAGT ATAGTTCGG GTCTnTACAC ACGCCCGTCA CACCACGGAG GGTTTTACAC	240

## (2) INFORMATION FOR SEQ ID NO: 4644:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 285 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4644:

CAGCAGGCCA	CCAAAATTGT	GGTCCGAGAT	GTTCATATAA	AACTTTATAT	AATTCATCAG	60
TTCTTAACAT	TTACACCTC	CATTTTAGAG	GGAGTGGGAC	AGAAATGATA	TTATCGTAAA	120
ATTTATTTCG	TGTCGCCACC	CCAACCTGCA	TGCTGTAGA	AATGGGGATC	CAATTCTT	180
GTGGGGGGCC	CGCGGGCAAG	GThACTAGAA	TGAAAAAAGC	CTGTTACAAG	CGATTTTCGG	240
TTCACTCCAC	TACTGGCAAT	ATAACTTGTA	GAGCTAGGAC	ATTGG		285

## (2) INFORMATION FOR SEQ ID NO: 4645:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 206 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4645:

GCTATTACTC	TGCTATCAAT	GTACCTAAAG	CTACCGATGA	TTCCGAGAC	ATAGACCGTG	60
CGCTTGInTG	GGGGTTCAAC	TGGAAACTTG	GTCCATTCCA	ATTATGGGAT	GCAATGGGGn	120
TACGAACGTG	TTAAAAAGT	ATGGAAGACG	AACCTGGAGA	CTTACCACAA	TGGGTTAGTG	180
ATTAGATCG	TGGCTTTTGA	TAAACA				206

## (2) INFORMATION FOR SEQ ID NO: 4646:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 222 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4646:

ACAGTTACCG	ATACAACTGA	AGATGATAAC	GATGCAGATG	GTGGCGACGT	TGACGTCACA	60
CTTACGGATC	ATGATGATTT	CACACTTGAT	AACGGATACT	TCGAGATGAT	ACATCAGACA	120

CnGACAGTGA TTCAGATTCA GACAGCGACT CAGATTcnga TA

222

(2) INFORMATION FOR SEQ ID NO: 4647:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 200 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4647:

GTACTATTGCG TGTGTGACAA TGTCTTCCA GCATTGCTT AATGAATGCT TTTTCTTCGT 60  
 TTAATCTTTG TAAACGAAAG CGTATCTAGT TGATTATTTT CAACAAAAGC nTCTACATCA 120  
 GnCGGGATAA CGTAAGCAAT ACCACCACTC ATACCTTGAC CGAAGTTCCT ACCTACATCA 180  
 CCGAAATTAA TGACAGTCCA 200

(2) INFORMATION FOR SEQ ID NO: 4648:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 201 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4648:

CCACCATTAA TTTAATACCT ATTTGGGGGC TTAGCTCAGC TGGGAGAGCG CCTGCTTTGC 60  
 ACGCAGGAnG TCAGCGGTTG GATCCCGCTA GTCTCCACCA TTAATTTGTAC ATTGAAAACT 120  
 AGATAAGTAA GTAAAATATA GATTTTACCA AGCAAAACCG AGTGAATAnA GAGTTTTAAA 180  
 TAAGCTTGGA ATTCATTAAG A 201

(2) INFORMATION FOR SEQ ID NO: 4649:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 218 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4649:

AGTAAATACA GATGGAATAA ATCTTTTAAG GCTTATAAAC GCTCATCTGn CATTGTAGCA 60  
 ATTCTGCTT TCAAAGACG ATATACTACG ACACTCCTAC GAACCTGTCC AAGGATTACG 120

AAAGTCTGTG AGTAAGGGTG TATGGAAAGT GGThAAAT

218

(2) INFORMATION FOR SEQ ID NO: 4650:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 202 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4650:

GTGGCGGTGC GACTGTCAGA AGCACGTAA ATTAATGAAA GATACAGTAG GTGCTGATGT 60  
 AGAAGTAAAA GCCATCAGGT GCGGTACGTA ATTTAGAAGA TTCAATAAA ATGGTTGAAG 120  
 CAAGTGCAC ACGTATTGGT GCGAGCGCAG GTGTTCAAAT TATGCAAGGT TTAGAAGCAG 180  
 ATTCTnGATTA CTATATnTA TG 202

(2) INFORMATION FOR SEQ ID NO: 4651:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 209 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4651:

AGGGCGGGAC GGGTGAGTAA CACGTGGATA ACCTACCTAT AAAACTGnA TAACCTCnGG 60  
 AAACCGGAGC TAATACCGA TAATATTTTA AACCGCATGG TTCAAAAGTA AAAGACGGTC 120  
 TTGCTGTAC TATAGATGG ATCCGGCTG CATTAGCTAG TTGTAAGGT AACGGTTAC 180  
 CAAGGCAACG ATGCATAGCC GACCTGAGA 209

(2) INFORMATION FOR SEQ ID NO: 4652:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 202 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4652:

TGAAGATGCA GGTACCCTGC GACAGGACGG AAAGACCCCG TGGAGCTTTA CTGTAGCCTG 60  
 ATATTGAAAT TCGGCACAG TTGTACAGn TAGGTAGGAG CCTTTGAAAC GTGGAGCGCT 120

CCACTTATCG TGGTTGGAGA CA

202

(2) INFORMATION FOR SEQ ID NO: 4653:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 205 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4653:

CCGTGCGACC CTTTGGTCC CAAACCAAGT GCTCTACCAA GCTGAGCTAC GTTCCCGGTA 60  
 TAATTAACGC GCCCGATAGG AGTCGAACCC ATAACCTCTT GATCCGTAGT CAAACGCTCT 120  
 ATCCAATTGA GCTACGGGGC CATATGTTTT TATTGAAAT GGTGCCGAGG ACCGGAATCG 180  
 AACCGGTACG TGATCACTCA AChn 205

(2) INFORMATION FOR SEQ ID NO: 4654:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 264 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4654:

AGACGAAACG TTGTTGTTGC GAAGATAAAT CGCAGACGGA TTGAGCCTAT CTGCTGCACC 60  
 ATTAACCTGT GAAGTAACAC CATTATCAGA AGTGCCTGAT CAAGTGTTCA GCGAAAAAAT 120  
 GATGGTGACG GTATCGCTAT CAAACCTTCA CAAGGTGAAG TTCGTGCACC ATTCAACGGT 180  
 AAAGTACCAA TGATTTCCCA ACCAAACATG CCATTGGTCC TGTATCAGAT AGTGGTTAGn 240  
 CTATTAATCC ACACGGGTTA GAnG 264

(2) INFORMATION FOR SEQ ID NO: 4655:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 211 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4655:

GAGGATTACA TATCATCGCT AATAACTTAG CATTAAAACC GCTTGATGCG CCACCACAAG 60



AACACAACGA ACTGGGnACA TGCTTCGGTT AAATCCATCA ATTTCACGC TTGtnACGCG 180  
 AAATCAGITT GCTCTGGCT GCAGTAAATC G 211

(2) INFORMATION FOR SEQ ID NO: 4656:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 212 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4656:

TTTACATTTA TCGTTTAGT CAGATTCAAA CGTTTCACT TCGCCAAGCC ATCTTTCTTT 60  
 GTGTTTGCTT TTATTTTGAC GTTTTAGACA TAAAAAAGA GACCTTGGG TCTCAATGCG 120  
 GCTCATGCA TCCACTTTTT GCCTGGCAAC GTTCTACTCT AGCGGAACGT AAGTTCGACT 180  
 ACCATCGACG CTAAGnGCT TAACTGnTG GT 212

(2) INFORMATION FOR SEQ ID NO: 4657:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 200 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4657:

TGGGTTGAA nTCCACTTAG GACCCACCAT TAACTTAATA CCTATTGGG GGCTTAGCTC 60  
 AGCTGGGnAG AGCGCTGCT TTGCACGAG AGGTGACGG TTCGATCCC CTATCTCCAC 120  
 CATTATTGT ACATTGAAA CTAGATAAGT AAGTAAATA TAGATTTTAC CAAGCAAAAC 180  
 CGAGTGAATA AAGAGTTT 200

(2) INFORMATION FOR SEQ ID NO: 4658:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 185 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4658:

TACAGTATAT CGGGAAGACA GGATTCGAAC CTGCGACCCC TTGGTCCCAA ACCAAGTGCT 60

CTCTTGATCC GTAGTCAAAC GCTCTATCCA ATTGAGCTAC GGGCGCATAT GTTTTTATTG 180  
 AAAAn 185

5 (2) INFORMATION FOR SEQ ID NO: 4659:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 208 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

10

15 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4659:

AAGTGTAGG GGGTTCCGC CCCTTAGTGC TGCCAGCTAA CGCATTAAAG ACTCCGCCTG 60  
 GGGAGTAGCA CCGCAAGTGT ATAAC TAAA GGAATTGACG GGGACCCnCA CAAGGTGGGA 120  
 20 GCATGTGGTT TAATTCGAAn CAACGGCGCAG TAACTTTACC AAATCTTGAC ATCCTTTGAC 180  
 AACTCTAGAG ATAGAGCCTT CCCCTTCG 208

(2) INFORMATION FOR SEQ ID NO: 4660:

25 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 365 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4660:

35 ACGTCGCGAG AAGCAATTA GCTGAAAAAG ATTACAACAT TAGAACAAGA TTAAAGTCA 60  
 CATTTAGTGA ACATCAAAGG CCGAATAACA TCATAAATTA CGATTAGATA TAACAAAAGA 120  
 GCTTGGGACA TAAGTCTTAA AGTCTTAGGC AAGTAAAAAA GTGATTCTTA TTATTTATTT 180  
 40 GATAGAAATC ACTTTTGTAT ATGTATTnT ATGTACAGCT CGTTGAGCnC TATTTTCCTT 240  
 ATATTAGTGC CATAATACAA ACCTAGCTCT TGTTTAACTT TATTATTCCG AACTGACATC 300  
 45 GGTGAACCCA ATAGCCTCAT AAGCAAACAG CTTACATCAT TTTCTTGA nT GGTTTTCGTT 360  
 CTGTC 365

(2) INFORMATION FOR SEQ ID NO: 4661:

50 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 209 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4661:

AAAGTATTTC TTTATGTTGG GGGGACCCC ACTTTGnCAT TGTCGTAGA AATTGGGAAT 60  
 5 CCAATTCTCC TnATGTTGGG GCCCGCAGT TCAACTACTG CCAATATAGT GTTGTAGTGT 120  
 CTAAGACATA AAAGTTTATC TCAGTCACAA TTACTTTATA GCCTATCCAT CATCTTTTCT 180  
 10 ACATGAAATT TTCCAAGT ATATATTT 209

(2) INFORMATION FOR SEQ ID NO: 4662:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 246 base pairs  
 15 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4662:

TTATGGCACT TAAACACAGC GATGACGATT GCAGTATCAC ATGGTATCTT CAACATAACA 60  
 AATCTTTTGA TTCAATTAGC ATTGTAGCA GGTTAGCAT GGATTGTTAC AAAGCTTGTG 120  
 25 CCAGGTAAG ATATTGCTGA TGACTATAAA CCTCAGCACT TAAACCAAGG TCTGTTATCA 180  
 CGCACCTGGT GTTGCATAC CAGGAAGTCC AAAAGGATTA CCAAATGTTg GGGCAGAnTG 240  
 30 GCCTAA 246

(2) INFORMATION FOR SEQ ID NO: 4663:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 226 base pairs  
 35 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4663:

AATGTTGTAT TATGAGTAGT AATAATTAGC AAAGAGGTAA ATTAAGTGAT GTCGCTCAT 60  
 45 TTAAGGAAGC GATTACAAT CGAGAATCAC AAAGTACAAC TGGTATCGGC GAAGGTATnG 120  
 CCATTCACA TGCCAAAGT GCCGAGTTA AGTCACCAGC TATTGCGTTT GGTAAATCTA 180  
 AAGCAGCGCT AGATTATCAA AGnTTTTTGGT ATGCAACCAG CACACT 226

(2) INFORMATION FOR SEQ ID NO: 4664:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 234 base pairs  
 55 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4654:

5    TTCGCTCTCG GCACCATTTT AGCGCGTAG CTCAATTGGA TAGAGCGTTT GACTACGGAT    60  
      CAAGAGGTAT GGGTTCGACT CCTATCGGGC GCGCATTTTT AAATTAATTG AATAACGGGA    120  
 10    GTAGCTCAGC TTGGTAGAGC ACTTGGTTTG GGACAAGGGC GCAGGTTCGA ATCCTGTCTC    180  
      CCGATTACTT CTAATCCAT TTATGGGGCT ACTCACTGGG nACGCCCTCTT nCAC    234

## (2) INFORMATION FOR SEQ ID NO: 4655:

- (i) SEQUENCE CHARACTERISTICS:  
      (A) LENGTH: 196 base pairs  
      (B) TYPE: nucleic acid  
      (C) STRANDEDNESS: double  
      (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4655:

20    GTACATCTAA AATCATCCAT GAAGTTTGT TACCTGAATT ACGGAATGAT TCAACAACCTT    60  
 25    CTAACGTTT AATTnACCAG TAAGTCTTG CCAAGTAGCT GATTCCAACCT CATCGCGTAC    120  
      AATTTAAGTC TTGGTCAAGA TCAATCCTCT TCAAGTAAAT CTTTAATAAC CTTCTGCACC    180  
 30    CATTTTTGCA CGAATT    196

## (2) INFORMATION FOR SEQ ID NO: 4656:

- (i) SEQUENCE CHARACTERISTICS:  
      (A) LENGTH: 226 base pairs  
      (B) TYPE: nucleic acid  
      (C) STRANDEDNESS: double  
      (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4656:

40    CCGCCGAACA ACTACTTTGT TTGTGATTC TCTCCACCTG TTTCAGTAGT TCAGATTCTT    60  
      TAGATTGTGG TTTTITAGTT GGTGCCATGC TTAACTTTT TCATTGATTT CAATAACAGG    120  
 45    TGTTACTACT TACCTGTCC ACGGTTTAGA AGGCTTTTAG GTTCTCTTG GCAGTGGTn    180  
      GGTTTACCAG TTCACGGTA CCGCGGTGTT GgncGTGTTG GATTTC    226

## (2) INFORMATION FOR SEQ ID NO: 4657:

- (i) SEQUENCE CHARACTERISTICS:  
      (A) LENGTH: 187 base pairs  
      (B) TYPE: nucleic acid  
      (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4667:

```

5      GTTCTGAATA GGGCGTTTAG TATTGGTCTG TAGCCGAAAA CCGGTGATCT ACCCTTGGTC      60
      AGGTTGAAGT TCAGGTAACA CTGGAATGGG AGGACCGAAC CGACTTACGT TGAAAAGTGA      120
10     GCGGATGAAC TGAGGGTAGC GGAGAAATTC CAATCGAACC TGGAGATAGC TGGTCTCTCT      180
      CGAAATA      187

```

(2) INFORMATION FOR SEQ ID NO: 4668:

(i) SEQUENCE CHARACTERISTICS:

```

15     (A) LENGTH: 182 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: double
      (D) TOPOLOGY: linear
20

```

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4668:

```

      CTAAGTGAGG TTGTCACAAc ATCTTTAAAC GTTCCAGGTA AATAGTCTTT TGCCATTCTT      60
25     GAAAATGCTT TTGCCAACGT TTTATAAATA TCCAGTCTG AACGCGATTc CCATAACGGA      120
      TCAATGGCAG GATTGAAAGG ATGTACATAT CGATGCATAT CCGTTGATGA TAAATCATGn      180
30     TT      182

```

(2) INFORMATION FOR SEQ ID NO: 4669:

(i) SEQUENCE CHARACTERISTICS:

```

35     (A) LENGTH: 182 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: double
      (D) TOPOLOGY: linear
40

```

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4669:

```

      AGTACGTITA AAAGATGAAA ACGACAAAGT TTTAAAAACA GTTACAACAG ATGAAATGG      60
45     TAAATATCAA TTCACTGATT TAAACAATGG AACTTATAAA GTTGAATTcG AGACACCATC      120
      AGGTTATACA CCAACTTCAG TAACTTCTGG GAAATGATAC TGCAAAAAGA TTCTAATGGT      180
50     TT      182

```

(2) INFORMATION FOR SEQ ID NO: 4670:

(i) SEQUENCE CHARACTERISTICS:

```

55     (A) LENGTH: 185 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: double

```

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4670:

5 GGGGCAAAGT CATThCATAG ATTAAATGGTT CTCCGATACC TAGGAAACCA ACTGGCAATG 60  
 CACCTTTTAA AGTATTACGT AATGTTGTGT TGC GTTTACA TCTTACCCAA AGTGCTAATG 120  
 10 CGGCACCTAC TTGTCCAGCA CCAGCCATCG CTGCAATTGG CAATAAGTAA GTAGCACCTG 180  
 ATTGG 185

## (2) INFORMATION FOR SEQ ID NO: 4671:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 200 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4671:

25 CTGACGAACG AGAAAGAGCG GCAACGATTT AGTAGAGTAA ATGAGTTAAG CGAGACCGAA 60  
 GAAGAGGAAA GAAGCAAGCG ATTGTCACAA GTCAAGAAAG GTTCTTAGCG TTCGATGGTA 120  
 GCCAACCTTAC GTTCCGCTAG AGTAGAACGT TGCCAGGCAA AAAAATGGAT GCGATGACCG 180  
 30 CATTGAGACC GCAAGGnTnT 200

## (2) INFORMATION FOR SEQ ID NO: 4672:

35 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 261 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4672:

40 CCCGGGTAC AGTTATTCCT CAGAGTCAAC GCGGGGGTTG GACTCGATGT CGGTCATCGC 60  
 ATCTGGGCT GTAGTCGGTC CCAAGGGTTG GGCTGTTCGC CATTAAAGCG nACGnTGCTG 120  
 45 GGTTCAAGCG CGTGAGCAGT CGGTCCCTAT CCGTCGTGGG CGTAGGAAAT TTGAGAGGGC 180  
 TGTCTTAGT ACGAGAGGCC GGGATGGCAT ACCTTGGTGT ACCATTGTGC TGCCACGCAT 240  
 50 ACTGGGTAGT ATGTGTGGAC G 261

## (2) INFORMATION FOR SEQ ID NO: 4673:

55 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 184 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4673:

ATAGGGCGTT TAGTATTGG TCGTAnCCAG AAACCAGGTG ATCTACCCCTT GGTGAGGTG 60  
AAGTTCAGGT AACACTGGAT GGAGGACCGA ACCGACTTAC GTTGAAAAGT GAGCGGATGA 120  
ACTGAGGGTA GCGGAGAAAT TCCAATCAA CCTGGAGATA GCTGTTCTC TCCGAAATAG 180  
CGTT 184

15

(2) INFORMATION FOR SEQ ID NO: 4674:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 203 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4674:

CCCAGTCAA CTGCCCCCT GACACTGTCT CCCACCAGTA TAAGTTCGTG GGTGAGAAA 60  
GCCAACACAG CTAGGGTAGT ATCCCACCAG CGTnCTCCAC GTAAGCTAGC GCTCAGTTT 120  
CAAAGGCTCC TACCTATCCT GTGACAAGnT GTGCCGAATT TCAATATCAG GCTACAGTGA 180  
AAGCTCCACG GGGTTCCTTC CGT 203

35

(2) INFORMATION FOR SEQ ID NO: 4675:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 229 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4675:

nngTTTGTA ATAATATGGT GGAGACTAGC GGGATCGAAC CGCTGACCTC CTGCGTGCAA 60  
AGCAGGCGCT TCCCAGCTG AGCTAAGCCC CCATAATAAT TACAGTATAT CGGGAAGACA 120  
GGATTGGAAC CTGCGACCCC TTGGGTCCCA AACCAAGTGC TCTACCCAGC TGGAGCTTAC 180  
TTTCCCGGTA TTATTTAACG CGGCCCGATA GGGAGTCGGA ACCCATTA 229

50

(2) INFORMATION FOR SEQ ID NO: 4676:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 178 base pairs

55

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4676:

	TCTAAAAATC GCGCACTTAA ACCGCTTATG ACAATCATT	60
10	TTACCTCAAT ATGCTTGTC	
	TCACCTTGCTT TATCGTCGT TCATTGGCTA TATAGTTAAT	120
	ATGAAAAGAC GCTCAAACAC	
	TTACAAATTT AGTGTGChGA GCGTCTTATT TTTATACTTT	178
	AAAAGTCGTA TTGGTTGT	

(2) INFORMATION FOR SEQ ID NO: 4677:

15

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 286 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4677:

25	GCAAGTAAGC ATAATGTGGA GCGTAGCGA AACAGTCTGA	60
	ATAGGGCGTT TAGTATTTGG	
	TCGTAGACCG GAAACCAAGT GATCTACCTT TGGTCAGGTT	120
	GAAGTTCAGG TAACACTGAA	
	TGGAAGGACC GAACCGACTT ACGTTGAAAA ATGAGCGGAT	180
	GAAGTGAAGG TAACCGGAGA	
30	AAATCCCAAT CGAACCTTGG GAGATAAGCT TGGGnTCTCC	240
	TCCCAGAAAT AAGCCTTTTA	
	GGGCTTAAG CCTCCAAAGT GATGATTTA ATTTGGAAGG	286
	TAAAAA	

(2) INFORMATION FOR SEQ ID NO: 4678:

35

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 229 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4678:

45	CACACGGCTT ATGGTAACAA AAAATTCCTT TGGAGCATT	60
	TGGAGCGGAA GATAGGTTTA	
	CACCTATACC TCGTTCCGGA AGGAnTGTTT TAAAAGTAA	120
	CTACTCCCGC AATATTAAAT	
	ATGGAGCGGA GATAGGATTT ACACCTATAC CTCATTCCAG	180
50	AGGATGTATT CTAAGAGTGA	
	AATACTCCCC ATATATTAAA TATGGAGCGG AGATAGGATT	229
	GACCATACh	

(2) INFORMATION FOR SEQ ID NO: 4679:

55

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 173 base pairs



(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4679:

ATGACTGCIT TTTATTATAC TTTACATTTC TCGTTTCGTC AGATTCAAAC GTTTTCACTT 60  
CGCCAAGCCA TCTTTCTTTG TGTTTGCTTT TATTTTGACG TTTTAGACAT AAAAAAAGAG 120  
ACCTTGCGGT CTCATGnGG CTCATCGCAT CCACCTTTTG CCTGGCAACG TTC 173

15

(2) INFORMATION FOR SEQ ID NO: 4680:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 183 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4680:

AAAAGTAACA AGAGAAGGAC AAAAAGGTGA GAAGACAATA ACGACGCCAA CAAAAATCCA 60  
TTAACTGGAG AAATTATTAG TAAAGGTGAA TCGAAGAAG AAATCACAAA AGATCCCATTT 120  
AATGnATTAA CAGAATACGG ACCAGAAACG ATAACACCGA GTCATCGAGA CGAGTTTGAT 180  
CCC 183

30

(2) INFORMATION FOR SEQ ID NO: 4681:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 203 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4681:

CGGTGCTTTC ACTTTCCTAC AGACTGGTTA CTATCGGTCA GAGAGAGATT TAGCnTTAGG 60  
AGATGGTCCT CCCGATTGCC GACGAATTTC ACGTGTCCG TCGTACTCAG GATCCACTCA 120  
AGAGAGACAA CATTTCGACG TACAGGATTA nTACCTTCTT TGATTCTCTT TTCCAGATGA 180  
TTCGTCTAAT GTCGTCCTTT GTA 203

50

(2) INFORMATION FOR SEQ ID NO: 4682:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 187 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double

55

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4682:

GGGTACACACC TGTTCCTCATG CCGAACACAG AAGTTAAGCT CCTTAGCGTG CGATGGTAGT 60  
 5 CGAACTTACG TTCCGCTAGA GTAGAACGTT GCCAGGCAA AAGTGGGATG CGATGGAGCC 120  
 GCATTGGAGA CGCAAGCCT CTGTTCTTTG ATGTCATAAA CGTnCAAAAT AAAAGCGAAC 180  
 10 ACAAGA 187

## (2) INFORMATION FOR SEQ ID NO: 4683:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 187 base pairs  
 15 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4683:

GGGTACACTG GTCATGATGC TGCTAACTA CGTGATTATn ATGAAACACA TCATGCTTTG 60  
 TCTGGATATG AAATGATTGA CGCAGCAAAG GTGCCATTGC AACAAATGAA GTCAATGCTG 120  
 25 CGATGGGTAT ATTTGTGCAA CGCCAACAAC TGGTTCCTCC GGTACCATCC CGGTGCAGTT 180  
 TTAAATT 187

## (2) INFORMATION FOR SEQ ID NO: 4684:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 168 base pairs  
 (B) TYPE: nucleic acid  
 35 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4684:

AGTGCCAAGG CATCCACCGT GCGCCCTTAA TAACTTAATC TATGTTTCCA TCCTACAGGA 60  
 AACCGTTATT AATCTTGTA GTGTCTTTTC GAACACTAGC GATTATnTCT TATGAATTCA 120  
 45 AGCTTATTTA AAATCTTTA TTCACTCGGT TTGTAAAAAT CTATATT 168

## (2) INFORMATION FOR SEQ ID NO: 4685:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 168 base pairs  
 50 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4685:

ACGGGAAGTA GCTCAGCTTG GTAGAGCACT TGGTTTGGGA CCAAGGGGTC GCAGGTTCTGA 60  
 ATCTCTGCTCT CCCGATTACT TCTTAAATTC CATTTTATGG GGGCTTAGCT CAGCTGGGAG 120  
 AGCGCCTGCT TThCACGCAG GAGGTCAGCG GTTCGATCCC GCTAGTCT 168

(2) INFORMATION FOR SEQ ID NO: 4686:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 174 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4686:

ATGATTCAAG CTTATTITAA ACTCTTTATT CACTCGGTTT TGCTTGGTAA AATCTATATT 60  
 TTACTTACTT ATCTAGTTTT CAATGTACAA TTTCTTTTGA GTCAAGCGCT CGCATACTGC 120  
 nTTATTTTCA AAAAATCAAA TGCTCATTTA CAAAAGTAAA CTCGCTTTT AATT 174

(2) INFORMATION FOR SEQ ID NO: 4687:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 166 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4687:

TGTTGTTGAA TATGAAGAAG ATACAAACCC AGGTGGTGGT CAGGTTACTA CTGAGTCTAA 60  
 CTTAGTTGAA TTTGACGAAG AGTCTACAAA AngTATTGTA ACTGGCCGAG TGAGCGATCA 120  
 TACCACAGTT GAAGGTACGA AAGAATATAC AACTGAAGTA ATCTGA 166

(2) INFORMATION FOR SEQ ID NO: 4688:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 189 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4688:

AGAACCCTTAC CAAATCTTGA CATCCTTTGA CAACTCTAGA GATAGAGCCT TCCCTTCGG 60

GCAACGAGCG CAACCCCTTAA GCTATTGCCA TCATTAAAGTT GGGCATCTAA TTGACTGCCG 180  
 GTGACAAAC 189

(2) INFORMATION FOR SEQ ID NO: 4689:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 227 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4689:

TAACCACTCC TCCTAACCTT CCAGCACCGG GCAGGCGTCA CCCCTATACA TCACCTTACG 60  
 GTTTAGCAGA GACCTGTGTT TTTTGATAAC AGTCGCTTng GGCTATTCAc TGGCGCTCTT 120  
 CTGGGCGTTA ACCCTAAGAn ACCCTTCTCC CGAAGTACGG GGGCATTtTG CGAGTCCTAA 180  
 CGAGGTGCTC GTCACCTAGA TTCTCATCTT GATACTGTGT GGTTCGG 227

(2) INFORMATION FOR SEQ ID NO: 4690:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 174 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4690:

AGATAATGCA CCATCAACTA ATGGATATTT ATGTCCAGTT GGGGGCCAGA AATCATAAAC 60  
 GTCTTCAGTG TAAGCAACAG CATCTTCATT TnGCAGCCAA AATGCTTGGA TTATGTGCAA 120  
 TAACCATCGC AACTGCGCCA CACCTTGTGT TGGCTCGCCG CCTGAAGTGG GGTG 174

(2) INFORMATION FOR SEQ ID NO: 4691:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 363 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4691:

TTTTTTTTTA AAAAAAGGGA AGGGAAAAAn AAAAGGGAAA AAAATTtTAAC CCAAGGGTTT 60  
 TTAAGGGGG CCcAATTTTT CCCAAAAAAA AAACCTTTTG GGTtAAATTT TTTTtAAAAA 120

GTTAAATTTT TTTAAAAAGG GTTCCCTTTT AAATTTTGGG AAAAACCCCC TTTTTTTTTT 240  
 TTAAGGGAAT TTTAAAAATT TAAGGCCCTC CCCTAAATTA AAATTAAAGG TGGGAAAAAA 300  
 5 AAAATTAATT AAAAACCCTA TTTTTTTTTT TTAATTTTTT AACCCAAAGG GGGTAATTGG 360  
 GCC 363

10 (2) INFORMATION FOR SEQ ID NO: 4692:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 210 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 15 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4692:

20 TAGTGTCAT TTTATTGATA TTTGCAATTA AACTGAAATT TAAATTTTCG GATGTATTTT 60  
 nTTTACTTAA AGTAAAAATG AACACGATT TGTGTCTGG GAATAGTGGA AATGATAAAA 120  
 ACTACTAATG ATTGATTAAG TAGTGGTTCT TAACATTAGC CTCAGCTAAT TGTTACTTAA 180  
 25 AAATAGGAAT ACATGAGTAA AACTCAnTGG 210

(2) INFORMATION FOR SEQ ID NO: 4693:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 209 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 30 (D) TOPOLOGY: linear

35 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4693:

ATAGTAGTAA AGTATTTTCT TCCAAACATT TATTTTGATT AAGTCTTCAT CATTAGTATT 60  
 40 CTCAGCTCCA CATGCACCAT CTTCACCTC AACCTATTAA CCTCATCATC TTTAGGATCT 120  
 TATAACCAAT TGGAAATCTC ATCTTGAGGn ngCTTCATCT TAGATGCTTT CACACTTATC 180  
 CCTCCACACA TAGTACCCA GCTATCCGT 209

45 (2) INFORMATION FOR SEQ ID NO: 4694:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 222 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 50 (D) TOPOLOGY: linear

55

GCACATTAAC CnAAGCACCA GGCCATATAG CAATTGTTGA TACAGTATTT AAATATTTAG 60

CATGTGACGG AATAGTTACA TATGTATTCA CTAAGGCCAT AATGACAAAT CCATTAAAAA 120

5 GTTGGATGCT TATTCGACCC TGCTAGATGA TCTGATGAAC GGAACGCATA TTAATAAAGT 180

ACGTGGTTAT GGATCAGTAA GATACTCTAC CAGTTACCAG nG 222

(2) INFORMATION FOR SEQ ID NO: 4695:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 159 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4695:

20 TCGTCTCAAA TAGAATGATT TAAATCTCG ATTTCTTTAT CTAATGACT ACCAATTAAA 60

TCTATTCTTT CTATTGTTAA ATCGCTATCT CCATCTTCTT TTATCTCTGG TATTATnTTT 120

TCTTCAACTA AGTCACGATA TAATGTTTTT GAATTTTTC 159

25 (2) INFORMATION FOR SEQ ID NO: 4696:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 161 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4696:

35 AATATGGTAG TTTTAACTT ATCTATTAAG GTACAATTGA CCAATCGAT AAAACAAATA 60

ATACGTATCG TCAGACAATT TATGTCAATC CAAGTGGAGA TAACGTTATT GCGCCGGTTT 120

40 TAACAGGTAA TTTAAACCA AATACGGATA GTAnTGCATT A 161

(2) INFORMATION FOR SEQ ID NO: 4697:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 170 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4697:

50 CCAAACTCAA TATGGCTTIA TTGGCACAGG GAACAGATAT GGAAGGTTTT ATTTATGGnT 60

55

ATATGGGATC AACACACAAA GCGGACGCA GTGAATATTA CGCAAATGA

170

## (2) INFORMATION FOR SEQ ID NO: 4698:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 161 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4698:

CCACGGCTAA CTACTGCCAG CAGCCGCGTA ATACGTAGTG GCAAGCGTTA TCCGGAATTA 60  
 TTGGGCGTAA ACGCGCGTAG GnGTTTTTTA AGTCTGATGT GAAACCCACG GTCAACCGGA 120  
 GGGTCATTGG AAATGGAAA CTTGAGTCAG AAGAGGAAGT G 161

## (2) INFORMATION FOR SEQ ID NO: 4699:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 248 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4699:

TAAATCTCA TCAATATGAT CTAACCAATA TTGATAAAAC CTTGATGTGT TTCGTGTCAA 60  
 TGACATACCA TATCGACTAG GTACCTTTTT AGAATGTTGA TTAATCACAA CAAATATCAT 120  
 GGGCAAGGTC ATCTTGCAAA ATGGATTGGA TTCAAGTGGG AGGGnCGATG ATGGACGTGC 180  
 TGCATGCACT GATGACCCTT TTTGCCCATC CTGGCAAATC CCACCATGAA ATGACTGACG 240  
 CGGACGCh 248

## (2) INFORMATION FOR SEQ ID NO: 4700:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 175 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4700:

CCCAGCAAG CGAACGTTTG GCACTGTCTC AACGAGAGAC TCGTGAAAT CATAGTACCT 60  
 GTGAAGATGC AGGTTACCCG CGACAGGACG GAAAGACCCC GTGGAGCTTT ACTGTAGCCT 120

## (2) INFORMATION FOR SEQ ID NO: 4701:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 177 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4701:

TACAGGGTAG	TGAGATTTCG	AAACAATATG	GAGAAGCAGG	ACTTCCTGGA	AAATACAATT	60
AATGTTTATA	CGAATGGTCA	TGCTGGTCAA	AGTTCTTGCA	GGCATATGCA	CGAAAGCTT	120
AATGATTCAT	CATACTGGAG	ATGCGAATGA	CTATGTTGGG	TAAAGGATTT	ATCTGGT	177

## (2) INFORMATION FOR SEQ ID NO: 4702:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 156 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4702:

CGATTGGATT	GCAGCTCTAA	GCAGTAAGGC	TGAGTATTAG	GCAAATCCGG	TACTCGTTAA	60
GGCTGAGCTG	TGATGGGGAG	AAGACATTGT	GTCTTCGAGT	CGTTGATTTC	ACACTGCCGA	120
GAAGAAGCTC	TAGATAGAAA	ATAGGTGCCC	GTACCG			156

## (2) INFORMATION FOR SEQ ID NO: 4703:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 166 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4703:

CITGAAAAAG	ATGGTTATTTC	TGTTGAAGTA	ATTGACTTAC	GTACTGTTCA	ACCAATCGAT	60
GTTGACACAA	TTGTAGCTTC	AGTTGAAAAA	ACTGGTCGTG	CAGTnGTCAG	CAAGACGCAC	120
AACGTCAAGC	TGGTGTGGT	GCAGCAGTTG	TAGTGAAAT	AAGTGA		166

## (2) INFORMATION FOR SEQ ID NO: 4704:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 153 base pairs



(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4704:

GCGGTGTCCT AACCGTTGA CCAAGGAGCC ATGGCTCCAC AGGTAGGhCT CGAACCTACG 60  
ACCGATCGGT TAACAGCCGA TAGCTCTACC ACTGAGCTAC TGTGGATTAA TATTATGCCT 120  
GGCAACGTTT TACTCTAGCG GAACGTAAGT TCG 153

(2) INFORMATION FOR SEQ ID NO: 4705:

15

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 163 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4705:

AGGTAGAGCA CTGTTTGGAC GAGGGGCCCC TCTCGGGTTA CCGAATTCAA ACAAACTCCG 60  
AATGCCAATT AATTAACTT GGAAGTCAG ACACATGGGT GATAAGGTCC GTATTCGAAA 120  
hGGAAACAGC CCAGACCACC AGCTAAGGTC CCAAAATATA TGT 163

30

(2) INFORMATION FOR SEQ ID NO: 4706:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 203 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4706:

TAAGGTGGG ATTGTTTGTG GGCTCGTTGC CACCCATTGT ACGGCACCTCA TCAnTTCAAG 60  
CCACCAGCTA CAGTATATCT CCTTGACCAG CCATAAATTG ATTGGCTGCA GTCGGGATGG 120  
TTTGTAAATCC TGATGAGCAG TAGCGATTCA TGTTTGACCh GTACCCGTCA GATATCCGCA 180  
GCAATGCAAT GTTGTCAGG TTT 203

45

(2) INFORMATION FOR SEQ ID NO: 4707:

50

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 153 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4707:

CGGGTGAGAA TCCGTCCACC GATTGACTAA GGTTCACAGA GGAGGCTCGT CCGCTCTGGG 60  
 5 TTAGTCGGGT CCTAAGCTGA GCGGCAGnGT AGGCGATGGA ATAACAGGTT GATATTCCTG 120  
 TACCACCTAT AATCGTTTTA ATCGATGGGG GGC 153

(2) INFORMATION FOR SEQ ID NO: 4708:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 150 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4708:

20 nCTATAATGA ATAAATAATT TAGAAATATG CTTCOGATTG TTCGATGCTT TAATTCAAGTT 60  
 AGAAGCATCA TAGAATGCAT GATTACTGTT GTAAAGATAC GTAATGTTTT GTATTGACTG 120  
 TATGTCCTTG GATAGAGTTA CAAACTTATT 150

25 (2) INFORMATION FOR SEQ ID NO: 4709:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 156 base pairs  
 (B) TYPE: nucleic acid  
 30 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4709:

35 AAAATTCGGG TTCTCAAATC ATCGGAACAT AACAAAACAA CCTAAGCAAC ATGTAGGCCG 60  
 TGTGCACTTA ACTTCTTGTT TTTCGATGA CAGCTTCTAT ThAGAGAATG TCATGATTAT 120  
 40 TTTATATTCA CTTCATGTT ATCAGTATTA GTGCCA 156

(2) INFORMATION FOR SEQ ID NO: 4710:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 149 base pairs  
 45 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4710:

50 GTTGATATTC CTGTACCACC TATAATCGTT TAATCGATGG GGGGGACGCA TAGGATAGGC 60

55

TCGTTAAGGC TGAGCTGTGA TGGGGAGAA

149

(2) INFORMATION FOR SEQ ID NO: 4711:

- 5 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 160 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4711:

15 TTGACTTCAA TACCATGGGC CAGGTACnCT TTAAATGTTG TTGTCTCAGT TAATATTAAT 60  
 TGGCTTTTCT TTGCATAAT TGACAATGGC TTCTGCCAAT GGGTGTTGAG AATCTTTTTC 120  
 AGCAGTAGCA AGTAGTTGGT AGCGTTTGAT TGGTCACCAG 160

20 (2) INFORMATION FOR SEQ ID NO: 4712:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 151 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4712:

30 ATAGTGAACC ACTACCGTGA GGACnAGGTG AAAAGCACCC CGGAACGACG TGAATAGAA 60  
 CCTGAAACCG TGTGCTTACA AGTAGTCAGA GCCCGTTAAT GGGTGATGGC GTGCCCTTTG 120  
 TAGAATGAAC CGGCGAGTTA CGATTGATG C 151

35

(2) INFORMATION FOR SEQ ID NO: 4713:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 145 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4713:

45 ACCAGTTGAT CTACCTTGG TCAGGTTGAA GTTCAGGTAA CACTGAATGG AGGACCGAAC 60  
 CGACTTACGT TGGAAAAGTG AGCGGGATGA ACTGnGGGTA GCGGAGAAAT TCCAATCGAA 120  
 CCTGGGAGAT AGCTGGTTCT CTCG 145

50

(2) INFORMATION FOR SEQ ID NO: 4714:

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(A) LENGTH: 151 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4714:

10 TGTAACGCAG AGATCGCGG TTGATTCCC GTGAGACCG CCATTTAATT TTATAATTAA 60  
 TAGCGATGTA CCTATAATAA TGGAGGAATA CCCAAGTCCG GCTGAAGGGA TCGGTCTTGA 120  
 AAACCGACAG GCCTTAACGG GCCGCGGGG T 151

15 (2) INFORMATION FOR SEQ ID NO: 4715:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 151 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4715:

25 TCGTATTGAA TGGCTTCGTT TCCTAGGGTG CCGTCTCAG CTCGGTCTTC GACTGGCACT 60  
 GCTCCCTCAG GAGTCTCGCC ATTAATACTA CGTATTAAACG TGTAAATTTA CTTTGAATA 120  
 30 CTTTAAAAAA ATAAGACACT TTGCCAACTT G 151

(2) INFORMATION FOR SEQ ID NO: 4716:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 152 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4716:

40 GCTGTCTATCG GAAJAACAAG AAGTTAAGTG ACAAGGGTTT ACATGTTGCT TAGCTTCTTT 60  
 TATTATGCGT AATGATGTAA AAAGACGAAT ATTCATTGTG TTGTAAAAAGT GGCATTCTTA 120  
 45 TGTCTTAAAA GTGACGAAAC TTCAChTGT GC 152

(2) INFORMATION FOR SEQ ID NO: 4717:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 144 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

50

55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4717:

GGATACTAGT AAAACCATAT TTAGTAAATA CAGATGGaTt AAATCTTTTA AGGCTTATAA 60  
 ACGCTCATCT GACATTGTAG AATTCATGCT TTCAAAAGAC GATATACTAC GACACTCCTA 120  
 CGAACTTGTG CAAGGATTAC GAAA 144

(2) INFORMATION FOR SEQ ID NO: 4718:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 145 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4718:

ATCATAAGGG GCATGATGAT TTACGTCATC CCCACCTTCC TCCGGTTTGT CACCGCAGTC 60  
 AACTTAGAGT GCCCAACTna ATGATGGCAA CTAAGCTTAA GGGTTGCGCT CGTTGCGGGA 120  
 CTTAACCCAA CATCTCAGCA CACGA 145

(2) INFORMATION FOR SEQ ID NO: 4719:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 156 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4719:

AAATACCTTT CCAGATCTT CAGCTGGGCG CCTCTGCACT CGCAAACGCA CTTGATGCAT 60  
 CAACAACACC ACCAAATAGT CCCTGCAATA ACCTCACAGT ACAAACTGTA ATGGTGTCGT 120  
 ACACnATGCC ATTtAAAAAT AGCATACCGG CAAAGC 156

(2) INFORMATION FOR SEQ ID NO: 4720:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 152 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4720:

TTAAATCGAG TCTCTTTTAC AGGTCCATAT TTGTGTAGT ATGACCCGGT GGCTAACTAC 60

TAACTCGGAT CAAATTGTC TCGATGACCT GG 152

(2) INFORMATION FOR SEQ ID NO: 4721:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 146 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4721:

CAC TAGT TCA AGT TCA AGT G G G A C G A T T G G T A T T T T T A C A A G A A G G A T 60  
 T T A A T T A G C T T A A A C G C n C A A T C C T G T G T T A C T A G G G C G G A T A A C A T T G G T A C C A C G G 120  
 T T A C A G C T A T C T T A G C T A G T T T A G C C 146

(2) INFORMATION FOR SEQ ID NO: 4722:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 156 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4722:

C C A C A C C A A T A T T T T G C G C T A A G T A n A T C G C A T T A A A C G T T T G C T T C C G C C A T T T G A G C 60  
 C A C A C T G C T C C A G C T C A T A G C G C T A T A T C G C A G G A A T A A T C A T T C C G C C A C C A C A C C C 120  
 T A A C A T T A C C C A G C C A T A C A G C C A T A C C A G G C C A C 156

(2) INFORMATION FOR SEQ ID NO: 4723:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 161 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4723:

A C G G T C T T G C T G T C A C T T A T A G A T G G A T C C G C G T G C A T T A G C A G T T G G T A A G G T A A C n 60  
 G C T T A C C A A G C A A C A G A T G G C A T G A G C C G A C C T G G A G A G G G T G G A T C G G G C C A C A C T G G G 120  
 A A C T G A G A C A C G G T C C A G A C T C C T A C G G G G A G G C A G A G T A 161

(2) INFORMATION FOR SEQ ID NO: 4724:

(A) LENGTH: 165 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4724:

10 CAGAAAGCTC ACGGGGCTTT CGTCTGTCGC GGGTAACCTG CATCTTCACA GGTACTATGA 60  
 TTTCACCGAG TCTCTCGTTG AGACAGTGCC CAAATCGTTA CgnCTTTCTGT GCGGGTCGGA 120  
 ACTTACCGGA CAAGTAATTT CGCTACCTTA GGACCGTTAT AGTTA 165

15 (2) INFORMATION FOR SEQ ID NO: 4725:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 149 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4725:

25 GGACGTTATA AGTGCTGAAA CATCTAAGCA TGAAGCCCC CTCAGATGA nATTTCCCAA 60  
 CTTCCGTTAT AAGATCCCTC AAAGATGATT AGGTTAATAG GTTCGAGGTG GAAGCATGGT 120  
 30 GACATGTGGA GCTGGACGAA TACTAATCG 149

(2) INFORMATION FOR SEQ ID NO: 4726:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 275 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4726:

40 TTGAATTTTT GAAAAAAAAA TGCCGAAATA AAAGATGCCA AGATATCCGC CGGGTAAAAA 60  
 45 ATTAAATTTT CGAAAAACCA GGTGTTGGTA CCCATTGCAT CTGGGGTGGC AAAAGCATTT 120  
 GCAGATAAAA TTGTATCAG TGGTTACGAT GGTGTACAG GGCTTCACCC AAACGAGTAT 180  
 CAGCATGCCG GTGTTCCTGG GAGATGGTTA GCAGAACACA TCAACATAAA CTAATGCTAA 240  
 50 GAnCGGTAAA GTAGACAnCG GTAGTATACT GAAAT 275

(2) INFORMATION FOR SEQ ID NO: 4727:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 149 base pairs

55

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4727:

ATCAATGAAC AACACATACA GATGCTACTG CGACGCCTAG AGTAACAAAA TAAGTTTTGT 60  
AAGCTCTATCC AAGACATAC AGTCAATACA AACATTACG TATCTTTACA ACAGTAATCA 120  
TGCATTCTAT GATGCTTCTA ACTGAATna 149

(2) INFORMATION FOR SEQ ID NO: 4728:

15

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 158 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4728:

GCACGTATT CCATTATCTT AATGGTTATC TTATCCTCAA CTAAATTGGA GGAATCACTA 60  
TGACAATTAA TAAAGAACCG TTCTTGGCGC AGCACAATGG GCGCTCACTG GCAGACTTTT 120  
GTGATGCTGA CTTAAAGTAA ACTATTAGAT ATTGnGTG 158

30

(2) INFORMATION FOR SEQ ID NO: 4729:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 138 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4729:

TCATTGACAT CGCTGGAATA GGTGTAATC CTGCGATTGG ATCTGGACCA TATTTTTTTA 60  
TTGTATACAG TAATTGTGCT GCGATTATCT CTGTAACGTC TTTCCAATTT GAnCGCACGT 120  
GCCCTCCCAT ACCTCGGG 138

45

(2) INFORMATION FOR SEQ ID NO: 4730:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 187 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

50

55



TAAAGACTAT ACCATTCTAT CCAATAATAA TTGGATTGCG ATTGTCTGA AITCGTAACC 60  
 GAGAGGCCCC TCGTCCAAAC AGTGCTCTAn CTCCAATAAT CATCACTTGA GGCTAGCCCT 120  
 AAGTATTTC GGAGAGAACC AGCTATTTCC AGTTCGATTG GAATTTCTCC GCTACCCCTCA 180  
 GTTCATC 187

(2) INFORMATION FOR SEQ ID NO: 4731:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 137 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4731:

CGCATCTCGG GGCTGTAGTC GGTCCCAAGG GTTGGGCTGT TCGCCATTAA AGCGGTACGA 60  
 AGCTGGGTTC AGAACGTGCT GAGACAGTTC GGTTCCTAT CCGTCGTGGG CGTAGGAAAT 120  
 TTAGAGGAG CTGTCCT 137

(2) INFORMATION FOR SEQ ID NO: 4732:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 137 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4732:

TCGTTCTCAA TAGAATGATT TAAATCTTCG ATTCTTTAT CTAATGACT ACCAATTAAA 60  
 TCTATTCTT CTATTGTAA ATCGCTATCT CCATCTTCTT TTATCTCTGG TATTATTTT 120  
 TCTTCAACTA AGTCACG 137

(2) INFORMATION FOR SEQ ID NO: 4733:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 137 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4733:

TCGTTCTCAA TAGAATGATT TAAATCTTCG ATTCTTTAT CTAATGACT ACCAATTAAA 60

TCTTCAACTA AGTCACG

137

(2) INFORMATION FOR SEQ ID NO: 4734:

5

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 153 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4734:

15

AAAACATAAA TACAAAATA TAGCTATTAC TATAAAAAAC AGCAGTAAGC ATATTTCCAA 60

ATTGCAAAATT ATCCTACTGC TGTCTTTTT GGGCAGTGGG nACAGCAAAT GATATTTTCG 120

ACAAAATTTA TTTCGTCGTC CCACCCCAAC TTG 153

20

(2) INFORMATION FOR SEQ ID NO: 4735:

25

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 142 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

25

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4735:

30

TAGAAATTAC GGACCCAATT TCTCTATGTT GGGGCCCATC CCCAACTTGC ACATnATTGC 60

AAGCTGACTT TTCGTCACTT GCTTTGTTGG GGCCCGGCCA ATAAGCGTTG TAGTGCCTAG 120

35

TACTTTGATT GATGTCCAAG TT 142

(2) INFORMATION FOR SEQ ID NO: 4736:

40

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 137 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

40

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4736:

ATGTTATTCA AAGTAAATTG CTTTGCTGTA TTTTGAGAC TGATAAATCG CTTCAAGAAT 60

50

TTTGTGAAC ACCATTGCTT GTTCGGGTTT CACAACTGGT TCAGTATCAT TTACAACnGC 120

ATCAATCCAA GCTTTTG 137

(2) INFORMATION FOR SEQ ID NO: 4737:

55

(A) LENGTH: 144 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4737:

10 GGTCGTTTAG TATTTGGTCG TACACCGCAA ACCAGGTGCA TCTACCCTTG GTCAGGTGTA 60  
 AGTTTCAGGTA ACACGTAAAT GGAGGACCGA ACCGACTTAC GTTGAAAAT GAGCGGATGA 120  
 ACTGAGGGTA GCGGAGAAAT TCCA 144

15

(2) INFORMATION FOR SEQ ID NO: 4738:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 157 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4738:

25 GGTAGCTAT GTGTGGACGG GATAAGTGCT GAAACATCTA AGCATGAACC CCCCTCAAGA 60  
 TGAGATTTCC CACTTCGGTT ATAAGATCCT CAAAGATGAT GAGGTTAATA GGTGAGGTG 120  
 30 GAACATGGTG ACATGTnATC TGCTTTTCTA ATCATAC 157

30

(2) INFORMATION FOR SEQ ID NO: 4739:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 145 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4739:

40 GCTTTATGTC TAAACGTCA AAATAAAAAG CAAACACAAA GAAAAATGGC TTGGCGAAGT 60  
 45 GAAACGGTT GAATCTGAGC AAACGAGAAA AGAACGCAAC GAGTTTAGTA GAGCTnATG 120  
 AGTAAGTGAG AGCCGAAGAG AGGGA 145

45

(2) INFORMATION FOR SEQ ID NO: 4740:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 234 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

50

55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4740:

5 TAGTAGCACC ACCCTTAGAC CTCTTGATT TGACATCGTT GTTCTTCCTT CCTTCGGTCT 60  
 CGTTACTCAT TTAGCTCTAC TAAACTCGTT GCGTCCTTTC TCGTTTCGTC AGATCAAACG 120  
 TTTCACTTCG CCAAGCCATT TTTCTTGTTG TTATTTTATT TGACGTTTAG ACATAAAAAA 180  
 10 GAGACCCACG TTCAACTTGC CnGCACGTTT TACTCTGCGG AnTAGTGGCT ACCA 234

(2) INFORMATION FOR SEQ ID NO: 4741:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 135 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4741:

20 GCAAGTCPTT TTAAAGGTAA CACTATCATT TATGCAATAC GCGCATTAC CAGAGTTGCA 60  
 TGGTCAAAT ATATTGTTG CATTTGAAGA TGGACGTGTA CAAAAATGCG TGTTACGTGA 120  
 25 TCATGATACT GTCA 135

(2) INFORMATION FOR SEQ ID NO: 4742:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 145 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4742:

35 ACCCTGGTAC AGTTGAATTC AGGTAACTT GAATGGAGGA CCGAACCGAC TTACGTTGAA 60  
 40 AAGTGAGCGG ATGAACTGAG GGTAGCGGAG AAATTCGAAT CGAACCTGGA GAnAGTGGT 120  
 TCTCTCCGAA ATAGCTTTAG GGCTA 145

(2) INFORMATION FOR SEQ ID NO: 4743:

45 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 151 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4743:

55

TGATTATCAT GGGTGGGGT ATTAACCATT GGTTTAACTC AGATACGATT TATnGTGCAA 120  
 TCTTAAACTT AGTTATGGTA TGTGGCGTCA A 151  
 5 (2) INFORMATION FOR SEQ ID NO: 4744:  
 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 132 base pairs  
 (B) TYPE: nucleic acid  
 10 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4744:  
 15 TAAAGCTAAA AACACAGCTC ATAATATCAA AAAAGGTGCA GAAGAAATGG TTGAAGCGGC 60  
 AGGCGATAAA ATCAnAGATG GTGCATCTTG GTTAGCGGAT AAAATCGCG ATGTGTGGGA 120  
 20 TTATGTACAA CA 132  
 (2) INFORMATION FOR SEQ ID NO: 4745:  
 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 132 base pairs  
 25 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4745:  
 30 CGTGCGCTCT AACCAGTGA GCTATAGGCC CATTAATTG AATGAACAAA CATTCAAAAC 60  
 TGAATACAAT ATGTCACGTT ATTCGCGATC TTCTGAAGAA GATGTCCGn ATATATCCTT 120  
 35 AGAAAGGAGG TG 132  
 (2) INFORMATION FOR SEQ ID NO: 4746:  
 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 138 base pairs  
 40 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 45 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4746:  
 GTGATCCGAC TCAGATAGCG ATCCGACTCA GATAGCGACT CAGATTGAGA CAGCGATTCA 60  
 50 GATTGAGACA GCGATTGAGA TTCAGATAGC GATTGAGATT CCGACAGTGA CTCAGATTCC 120  
 GACAnTGACT CGGATTCA 138  
 55

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 185 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4747:

CATTATTGTA AACTGAACTT TTCGTCACCT GCTGGTGTtT GGGGACCCCA CCAACTTGGC 60  
 ACATTATTGG TAAGCTGACT TTCGTCACCT TACTGTGTG GGGCCCCGCC AACTTGACAT 120  
 GTCTGTAGAA ATTGGGAATC CAATTCTCT ATGTGGGGC CACACCCCA ACTCGACATT 180  
 GCCTG 185

(2) INFORMATION FOR SEQ ID NO: 4748:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 173 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4748:

ACCGAATCCC TTCAGACCGG TACTGGGTA TTCCTCCAA ATTATATGGA CCTTGACAGT 60  
 ACTCGAAGCT GACGTACCGA AACGGTTATG AAGACCGTTA nCTCTAACCA ACTGAGCTAA 120  
 AGGATCCTAA ATATAATTT ACAACTAATA AATAGTGGAC GGTGGAGGGA TCG 173

(2) INFORMATION FOR SEQ ID NO: 4749:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 212 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4749:

ACACAAGGAT AAGGCATTGT TGGATGTGG ATGCTTTAAC TGGGCAAGCG ATTGGTCGT 60  
 CTAAACAGG TACATATGCC GGCTATCTGA CCTAGTCGGT TTAGATATTG CAGTGTCTGT 120  
 AATTAAAGG CATGCAACCA AGTAnCTGAG GAAACAACTT ATTTTCATGG TGCAAAAAT 180  
 TGTAAATAC GGTGTTTGAC AATTGCGCAC CT 212

(2) INFORMATION FOR SEQ ID NO: 4750:

(A) LENGTH: 140 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4750:

10 AATCTCAGGT TTTACCAAGC AAAACCGATG AATAAAGAGT TTAAATAAG CTTGAATTCA 60  
 TAAGAAATAA TCGCTAGTGT TCGAAAGACn GCAGCAAGAT TAATAACGCG TTAAATCTT 120  
 TTTATAAAAG AAAACGTTTA 140

15

(2) INFORMATION FOR SEQ ID NO: 4751:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 184 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4751:

25 ATTGTCAGC TCCACATGTC ACCATGCTTC CACCTCGAAC CTATTAACCT CATCATCTTT 60  
 GAGGATCTTT ATAACCGAAG TTGGGAAATC TCATCTTGAG GGGGGTTCAT GCTAGATGCT 120  
 30 TCAGACTATC CCGTCCACAC ATGTAACCAG nATGCGTGGG CGCATGGAAC AGGGATGTCA 180  
 TCCG 184

35

(2) INFORMATION FOR SEQ ID NO: 4752:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 133 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

40

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4752:

45 GGGATCTTCC GCAATGGGCG AAACGTGACG GAGCAACGCC GCGTGAGTGA TGAAGTCTT 60  
 CGATCGTAAA ACTCTGTTAT TAGGGAAGAA CATATGTGTA AGTAACTGTG CACATCTTnA 120  
 CGGTACCTAA TCA 133

50

(2) INFORMATION FOR SEQ ID NO: 4753:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 162 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double

55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4753:

GTATGCTGTG TGGCTTGTCA TGTTGGGTT TGGTGGCGGA CCGATTATT CCTGCGhTAT 60  
 ACGCTATGGC TGGAGCAGTG TGGCCAAATG GCGGAAGACA AACGTTTAAT GCGATCTACT 120  
 TGGCGCAAAA TATTGGTGTG GCTGTCGGTG CTGCAATGGG CG 162

(2) INFORMATION FOR SEQ ID NO: 4754:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 134 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4754:

AATTCGATTG CCTTAGTAGC GGCACGAAA ACGGGAAnGA GCCCAAACCA ACAAGCTTGC 60  
 TTGGGGGTT TGTAGGACAC TCTATACGGG GTTAACAAAG GACGACATTA GACGAATCAT 120  
 CTTGGGAAAG ATGA 134

(2) INFORMATION FOR SEQ ID NO: 4755:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 139 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4755:

AGAGTGCgTA ATAGCTCACT AGTCGAGTGA CACTGCGCCG AAAATGTACC GGGGCTAAAC 60  
 ATATTACCGC AAGCTGTGGA TTGTCCTTTG GACATGGCTA GGAGAGCGTT CTAAGGGCGT 120  
 TGAAGCATGn ATCGTAAGG 139

(2) INFORMATION FOR SEQ ID NO: 4756:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 163 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4756:



	CGTGAAATGC GCAGAGATAT GGAGGAACAC CAGTGGCCGA AAGCCACTTT CTGGTCTGTA	120
	ACTGGAACGCT GGATGTGCCA AACCTGGGGG ATCAAAACAGG TTA	163
5	(2) INFORMATION FOR SEQ ID NO: 4757:	
	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 160 base pairs	
10	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: double	
	(D) TOPOLOGY: linear	
15	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4757:	
	CATGAAACTA GATAAGTAGT AAATATAGAT TTACCAAGC AAAACCGAGT GAATAAAGAG	60
	TTTAAATAAA GCTTGAATTC ATAAGAAATA ATCGCTAGTG TTCGAAAGAC ATCACAnGAT	120
20	TAATACCGCG TTTAATCTTT TATAAGGAC CGTAACCTCA	160
	(2) INFORMATION FOR SEQ ID NO: 4758:	
	(i) SEQUENCE CHARACTERISTICS:	
25	(A) LENGTH: 177 base pairs	
	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: double	
	(D) TOPOLOGY: linear	
30	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4758:	
	TACATGGGTT TATTGTTGAA GATGACGAAA TTGTAGAAAT TTAATATTCT AAAAAGGTTG	60
35	GGGACATAAA TCCCCTAAA AAAACCGACA GTAAGATAAT TTTCAATTAG AAAATATCTT	120
	ACTGCTGTTT TCTATTATA CCAATTACT TTCGTAATTG TTAAAAATTT AAAAGGA	177
	(2) INFORMATION FOR SEQ ID NO: 4759:	
40	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 127 base pairs	
	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: double	
45	(D) TOPOLOGY: linear	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4759:	
50	CGGTGTGTAC AAGACCCGGG AACGTATTCA CCGTAGCATG CTGATCTACG ATTACTAGCG	60
	ATTCCAGCCT CATGTAGTCG AGTTACAGAC TACAATCCGA ACTGAGAACA ACnTTATGGG	120
	ATTTGCT	127
55		

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 145 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4760:

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GGGCCCCCTCG TCGGGTTACC GAATTCAGAC AAATCCGnA ATGCCAATTA ATTAACTTG      60
GGAGTCAGAA CATGGGTGAT AAGTCCGTGT TCGAAAGGAA ACAGCCCAGA CCACCAGCTA      120
AGTCCCAAAT ATATGTTAAT GAAAG                                             145

```

(2) INFORMATION FOR SEQ ID NO: 4761:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 228 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4761:

```

TAAACAAGGC GCGTTGGGCC TATTCATGCG GGCTCTTCTG GCGGTTAACC CTAAGAGCA      60
CCCTTCTCC CGAAGTTACG GGGTCAITTT GCGAGTTCC TTAACGAGAT TGCTCGCTCA      120
CCTTAGAATT CCATCTGACT ACGGTCGTTG CGTACGGCAC TATTTCTTCA AGCTTCCGCA      180
TTAACACACC AAAACAGCTC CCACCACCAC TaaATCGAnC AACACTAG                    228

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(2) INFORMATION FOR SEQ ID NO: 4762:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 130 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4762:

```

ThGCCAAATC TTAGTAGTCG CTTGGTTCGG TTGTGGTGGC ACAGCTGTGA AATCATCACT      60
ACGTTGCTCA TCATCTACTG TCTCTCCGCT TCCTTGCGTT GCAACAGCTT GAATGTATC      120
AGCAGGGTTG                                             130

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(2) INFORMATION FOR SEQ ID NO: 4763:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 151 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4763:

CAACTCGTAG TCAGGGTCGA AAGACGGGAC TTAGTGATCC GGTGGTTCCG TCATGGGTAG 60  
GGCCATCGTC TCAACGGTAT AAAAGCTACC CCGGGGATAA CAGGCTTATC TnCCCCAAGA 120  
GTTACATCG ACGGGGAGGT TTGGCACCTC G 151

(2) INFORMATION FOR SEQ ID NO: 4764:

15

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 128 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4764:

ACCCCAACTT GCATTGnCTG TAGAAATTGG GAATCCAATT TCTCTTGTG GGGGCCCCGC 60  
CGGCAAGGTT GACTAGAATT GACCAAAAGC TTGTTACAAG CGCATTTTTCG TTCAGTCAAC 120  
TACTGCCA 128

(2) INFORMATION FOR SEQ ID NO: 4765:

30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 135 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4765:

AATACAGCCC CAGAGCGATG AGCCGACATC GAGGTGCCAA ACCTCCCCGT CGATGTGAAC 60  
TCTTGGGGGA GATAAGCCTG TTATCCCCGG GGTAGCTTTT ATCCGTTGAG CGGATGGCCC 120  
TTTCCATGTG GnaAC 135

45

(2) INFORMATION FOR SEQ ID NO: 4766:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 126 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

50

55

GATTCTCACC CGTCTTTGCG TACTCACACC GGCATTCTCA CTCTAAGCG CTCACATGT 60  
 CCTTACGATC ATGCTTCAAC GCCCTTAGAA CnCTCTCCTA CCATTGTCCA AAGGACAATC 120  
 5 CACAGC 126

(2) INFORMATION FOR SEQ ID NO: 4767:

(i) SEQUENCE CHARACTERISTICS:  
 10 (A) LENGTH: 130 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4767:

TTAATAGTTT TATAAGAGAG GTGTTTGATC TTGAGCTAAC CACnTCATTG GAGTACTGTC 60  
 20 ATGAAGTAAT TTCTCTATTG TACGACCAGA AAATACAGAT GGGGTATATG CATATAAGAT  
 GATTTTAAAC 130

(2) INFORMATION FOR SEQ ID NO: 4768:

(i) SEQUENCE CHARACTERISTICS:  
 25 (A) LENGTH: 142 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4768:

35 GTTAACCCCTA AAGAGCACCC CTTATACCGA AGTTACGGGG TCATTTTGCC GAGTTCCTTA 60  
 AnGCGCGTTC GATCGCTCAC CTTAGGAATT CTCATCTTGA CTACCTGTGT CGGTTTGCGG 120  
 TAGGGCACCT ATTTTCCTAT CT 142

(2) INFORMATION FOR SEQ ID NO: 4769:

(i) SEQUENCE CHARACTERISTICS:  
 45 (A) LENGTH: 136 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4769:

50 CCTTGGGACC GACTACAGCC CCAGGATGCG ATGAGCCGAC ATCGAGGTGC CAAACCTCCC 60  
 CGTCGATGTG AACTCTTGnG TGGAGATAAG CCTGTATCC CCGGGGTGAG CTTTGTATCC 120

55

## (2) INFORMATION FOR SEQ ID NO: 4770:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 145 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4770:

CTAAAAAGTTG TATTTTAAAA ATAGTTCITT AAATTATATA CCCACCACAT TTGGTGGAGA 60  
 ACCGTTAAAC AATGCATAGT TTGCTTAACT TCCAATATTG ACTCATCATT ACAATTGACA 120  
 TAGAGCTATT AAGCGTnGCC ATGAG 145

## (2) INFORMATION FOR SEQ ID NO: 4771:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 128 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4771:

TCGAGTGACA CTGTCGCCGA AAATGTACCG GGGCTAAACA TATTACCGAA GCTGTGGATT 60  
 GTGCTTTTGG AAATGGTGAG GnGAGCGTTC TAAGGGCGTT GGAAGCATGA TCGTAAGGAC 120  
 ATGTGGGA 128

## (2) INFORMATION FOR SEQ ID NO: 4772:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 126 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4772:

GGGCAGATGT TCCTGCAGTC ATAGTGCCGT CAACTTTAAA TACTGTACGT AATTGGCTA 60  
 ATGCCTCCAT CGTGnTGTC AGGGCGTATA AATTCATCTT GGGTCAAAGA TATTTGGTGT 120  
 GTACTT 126

## (2) INFORMATION FOR SEQ ID NO: 4773:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 126 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4773:

5 GTCITTTTCTC GTTTCGTTCA GATTCAAACG TTTTCACTTC GCCAAGCCAT TTTTCTTTGT 60  
10 GTTTACTTTT TATTTTGACG TTTTAGGATA AAAAAAGAG ACCTTGCGGT CTCATGCGG 120  
CTCATC 126

15

(2) INFORMATION FOR SEQ ID NO: 4774:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 124 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4774:

25 ATTTCAATAT CAGGCTACAG TAAAGCTCCA CGGGGTCTTT CCGTCTGTG CGGGGTAACC 60  
TGCATCTTnA CAGGTACTAT GATTTCACCG AGTCTCTCGT TGAGACAGTG CCCAAATCGT 120  
TACG 124

30

(2) INFORMATION FOR SEQ ID NO: 4775:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 124 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4775:

40 ACCAAGTGAG CCGAAACAC CAACGCCACC AACACCAGAA GTACCAAGTG AGCCGGAAAC 60  
ACCAACACCA CCGACACCAG AAGTGCCGAG TGAACAGAA ACTCCAACAC CGCCAACACC 120  
45 AGAG 124

(2) INFORMATION FOR SEQ ID NO: 4776:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 135 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

50

55

CCGCTAGTC TCCACCATTT ATTTTTTACA CGATGAACAT TGAAAACThA ATACAATATG 60  
 CAACGTTAAT TCCAAAAAAC GTAACATAA GTTACAAACA TTATTTAGTA TTTATGAGCT 120  
 5 AATCAAACAT CATAA 135

(2) INFORMATION FOR SEQ ID NO: 4777:

(i) SEQUENCE CHARACTERISTICS:  
 10 (A) LENGTH: 144 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4777:

AGTGCGAAG AGGAAAGTGG AATAnCCCCA ACATAGCGGT GAAATGCGCA GAGATATGGA 60  
 20 GGAAACCCAG TGGCGAAGGC GACTTTCTGG TCTGTAACGT GACGCTGGAT GTGCGAAACG 120  
 TTGGGGGTTC AAACAGGATT TAGA 144

(2) INFORMATION FOR SEQ ID NO: 4778:

(i) SEQUENCE CHARACTERISTICS:  
 25 (A) LENGTH: 123 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 30 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4778:

AATTTTIGAT GACGGGTCCC TTCCTAGGGT GCCGTCGAG CCACCCCAAC CGGCACATTG 60  
 TTGTAAGCTG ACTATATGTC nTTCATGTGT TGGGGCCCTT GTCTTCGACT GGCACTGCTC 120  
 CCT 123

(2) INFORMATION FOR SEQ ID NO: 4779:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 127 base pairs  
 (B) TYPE: nucleic acid  
 45 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4779:

GCGCATTAAC TATCGCGATA TTAATCGCTA TTCTATATCG TCACCTTAGA GGATATCCTG 60  
 AACAAATATAG CTCAGGTATT ACGTTTTCAT CTAATATATT ATTAAGATTG GCAATCATCC 120

55

## (2) INFORMATION FOR SEQ ID NO: 4780:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 127 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4780:

GGTAATATGT TTAGCCCCGG TACATTTTCG GCGCANTGTC CTCGACTAGT GAGCTATTAC 60  
 GCACTCTTTA AATGATGGCT GCTTCTAAGC CAACATCCTA GTTGCTCTGG CAACGTCACA 120  
 TCCTTTT 127

## (2) INFORMATION FOR SEQ ID NO: 4781:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 129 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4781:

ACACnGGGTG AGAATTGTGCT GCTATTTGTA AATTGTATCC TGGCTTAAGT TGGCCAAAGT 60  
 GTCTTATTTT TTAAAGTAT TTAAAGTAA AATTACATGT TAATACGTAG TATTAAATGG 120  
 CGAGACTCC 129

## (2) INFORMATION FOR SEQ ID NO: 4782:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 136 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4782:

CTCATTCGCC TTGCATTTTA TCTTCTGCAA CAACAACATT TCGTCTTTAT CGTCTTCAT 60  
 AGTAGTAGGA TTTTCTACTA CTGACCATT CATAATCTGT TGCATTTTAT GTTTGnTTTG 120  
 GTCAGATTTA GGACCA 136

## (2) INFORMATION FOR SEQ ID NO: 4783:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 119 base pairs



(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4783:

CATCAACATC GCGCATTAAG AAGATGGACG TTTTGATGAT GTACAACAAG ACATTGAAGC 60

10 AGTGGTTAAA GCTGCGAAAG GTCACACAGT AAAAGTGATT ATTGnGACGG TATTGTGTGG 119

(2) INFORMATION FOR SEQ ID NO: 4784:

(i) SEQUENCE CHARACTERISTICS:

15 (A) LENGTH: 127 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4784:

ATCACTAATC CATTGTGGTA AGTCTCCAAG TTCGCTTCC ATACGTGTTT TAACCTGCGT 60

25 nATCCCATTT CATCCATAA TTGTGAATGG ACCAAGTTTC CAGTTGAACC CCCAGACAAG 120

CGCACGG 127

(2) INFORMATION FOR SEQ ID NO: 4785:

30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 119 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4785:

40 ACACCGGCAT GCTGAATACT CGTTTTGGGT GAAGCCCTG nACCACCATC GTAACCACTG 60

ATGACAATTT TATCTGCAAA TGCTTTTGCC ACCCCAGATG CAATGGTACC AACACCTGT 119

(2) INFORMATION FOR SEQ ID NO: 4786:

45

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 137 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

50

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4786:

55 CTTTCTAAAC CCGnCACAC TTTATCGTGG TGGGGAGACA GTGTTCAAGC GGGCCAGTTT 60

AATCAITCAT AGAGTGT

137

## (2) INFORMATION FOR SEQ ID NO: 4787:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 119 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4787:

GTITTTTAAACA CTGTTACCGT TTTTCATCTTT TAATGTTACC GTTACGCCAG AATACCTTT 60  
 TTCATCTTGG TCTTGGATAC CATTTTATT TGTATCTTCC CAGACATAGT CACCTAAGT 119

## (2) INFORMATION FOR SEQ ID NO: 4788:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 141 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4788:

CATGCTTCCA CCTCGAACCT ATTAACCTnc ATCATCTTTG AGGGATCTTA TAACCGCAGT 60  
 TGGGAAATCT CATCTTGTAG GGGGGCTTCA TGCTTCAGAT GCTTTGCAGC ACTTAGCCCCG 120  
 GCCACACATA GCTACCCAGC T 141

## (2) INFORMATION FOR SEQ ID NO: 4789:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 139 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4789:

CTGGGTTTCAAG AACGCTCTAAG CAGTTCGGTC CCTATCCGTC GTGGGCGTAA GAAATTTGAG 60  
 AGGAGCTGTC CTTAGTACGA GAAGACCGGG ATGGACTACC TCTnGTGTAC CAATTGTCGT 120  
 GCCAACGCAT AGCTGGGTA 139

## (2) INFORMATION FOR SEQ ID NO: 4790:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 129 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4790:

CATTATTAG TATTATTAG CTAATCAAAC AAcATAATT TTATGGAGAG TTTGATCCTG 60  
GCTCAGGATG AGCGCTGGCG GCGTGCCTAA TACATGCAAG TCGAGCGAAC GGACGAGATG 120  
CTTGCTTCG 129

(2) INFORMATION FOR SEQ ID NO: 4791:

15

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 120 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4791:

GGGTGCTCTT TAGGGTTAAC GCCCAGAAGA GCCGCAGTGC AATAGGCCCA AGCGACTGTT 60  
TATCAAAAnC ACAGGTCTCT GCTAAACCGT AAGGTGATGT ATAGGGGCTG ACGGCTTCCC 120

(2) INFORMATION FOR SEQ ID NO: 4792:

30

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 123 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4792:

CAAATTCCTT CGCTACTTGA ATGACAACAC TTTGTTTTAC GCCTGAAATG GCTTCTTGCC 60  
AAGCAGGTGT ATATTTTGAT TCTGCATCGT CGTATCCTTT TGATCTAATT ATGATCAAAC 120  
CGn 123

45

(2) INFORMATION FOR SEQ ID NO: 4793:

50

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 130 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4793:

AGTTTGAAT GTTGTTCAT TCAAATTAAT GGGCCTATAG CTCAGCTGGT TAGAGCGCAC 120  
nCTGATAAC 130

(2) INFORMATION FOR SEQ ID NO: 4794:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 115 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4794:

CACAGCCACA AGTGATTAAA GGCTTACCCA ATGATCCTGA AATGACGATA GAGTCAGTAT 60  
TAACCTATT TTCAATAGAT CAGGAAGACT ACCAAGCTTA TGTnGAAGGA CATCT 115

(2) INFORMATION FOR SEQ ID NO: 4795:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 224 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4795:

nTTAAAAAA ATTCCCAATT TTTTGGGG GGTGGGAAT TTAATAATT GTTTTTAAC 60  
CCAAAGGCC TTTTCCCAA AATTAAATT CCTTAAAAA TTAAAAATT GGAATTTTT 120  
TTTnGGCCC AAAATTTTT CCCTTTTTT AAAGGCCCA ATTITTAAT TAACCCCTAA 180  
AACCCCAAA CCTTTTTTCC TTTTAAAAA TTTTITAAA TGGA 224

(2) INFORMATION FOR SEQ ID NO: 4796:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 120 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4796:

TCGCGTACCG CTTTAATGGG CGAACAGCAA GACCTTGGGC ACCGACTACA GCCCCAnGAT 60  
GCGATGAGCC GACATCGAGG TGCCAAACCT CCCGCTCGAT GTGAACTCTT GGGGGCAGAT 120

(2) INFORMATION FOR SEQ ID NO: 4797:

(A) LENGTH: 125 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4797:

10 AATTGGATTC CCTTAGTAGC GGCGAGCGAA ACGTGAAGAG CCCCAACCA ACAAGCTTGG 60  
 CTGTTGTGGT TGTAGGACAC TCTATAACGG GAGTTACAAA GGACCGACAT TAGACGAATC 120  
 ATCTG 125

15 (2) INFORMATION FOR SEQ ID NO: 4798:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 113 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4798:

25 CAAAATAATG ACTCCTACGG GnCTCGAACC CGTGTTACCG CCGTGAAAGG GCGGTGTCTT 60  
 AACCGCTTGA CCAAGGAGCC ATGGCTCCAC AGGTAGGACT CGAACCTACG ACC 113

30 (2) INFORMATION FOR SEQ ID NO: 4799:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 116 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4799:

40 CCGTGGGAG GTAACCTTTT AGGAGCTAGC CGTCGnAGGT GGGACAAATG ATTGGGGTGA 60  
 AGTCGTACA AGGTAGCCGT ATCGGAAGGT GCGGCTGGAT CACCTCCTTT CTAAGG 116

45 (2) INFORMATION FOR SEQ ID NO: 4800:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 112 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

50

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4800:

55

TCAGTCCGAT GATTCTGTAA ATTGAAACGC AAGATTTCGA TATCGAACAC CT 112

(2) INFORMATION FOR SEQ ID NO: 4801:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 110 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4801:

ATAGGATAGG CGACGTGCGA TTGGATTGCA CGTCTAAGCA nTAAGGCTGA GTATTAGGAA 60

ATCCGGTACT CGTTAAGGCT GACTGTGATG GGGAGAAACA TTGTGTCTTC 110

(2) INFORMATION FOR SEQ ID NO: 4802:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 237 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4802:

GAACCAAGTT GTTATTGAAA AnTCGTTTCGT AAAGTTACGG TACGCCACC GTGAGTGCTT 60

TTACTTCTAT ATCAGCACCT ACTGTATCTT TCATTAATTT AACGCTCTTCT GCAGTCGCAC 120

CGCCACCTGC AAAACCTGTT GAATTTTACG AGTCGCCACC GCGCTTTGTA ATCATnCTTA 180

CATTCTCTGT CACAACGCCA TACCTTCGGG ACTGACTCAC AGCTCAGCGG AACACAA 237

(2) INFORMATION FOR SEQ ID NO: 4803:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 114 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4803:

CTTGAAACCC CAACCTACTG ATTACAAGTC AGTTGCTCTA CCAATTGAGC TAAGCCGGGC 60

AATATGTAAG AATAAATGGT GGAGAATTGA CGGGTTCGAA CCGCCGANCC TCTG 114

(2) INFORMATION FOR SEQ ID NO: 4804:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 113 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4804:

GGATCAAACA GGATTAGATA CCCTGGnTAG TCCACGCCGT TAAACGCATG AGTGCTAAGT 60  
GTTAGGGGTT TCCGCCCTT AGTGCTGCAG CTAACGCATT AAGCACTCCG CCT 113

10

(2) INFORMATION FOR SEQ ID NO: 4805:

(i) SEQUENCE CHARACTERISTICS:

15

(A) LENGTH: 108 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4805:

TACCAGGGTA TCTAATCCTG TTGATCCCC ACGCTTTCGG GCATCAGCGT CnGTTACAGA 60  
CCAGGAAAGT CGCCTTCGCC ACTGGTGTTC CTCCATATCT CTGCGCAT 108

25

(2) INFORMATION FOR SEQ ID NO: 4806:

(i) SEQUENCE CHARACTERISTICS:

30

(A) LENGTH: 115 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4806:

TTTCAGCACT TATCCCGTCC ACACATAGTC TACCCAGGCT ATGCCGTTGG CACGACAACT 60  
GGTACACCAG AGGTATGTCC ATCCCGGTCC TCTOGTACTA AGGAnAGCTC CTCTC 115

40

(2) INFORMATION FOR SEQ ID NO: 4807:

(i) SEQUENCE CHARACTERISTICS:

45

(A) LENGTH: 167 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

50

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4807:

CAGCCACATA ACATAACTAA GTTTAAGATT GAACGATAAA TCGTATCTGA GTTAAACCAA 60  
TGGTTAATAC CCGCACCCAT GATAATCATT GAACGCCTTC AGTATCGTAG GTTTGGAATT 120

55

## (2) INFORMATION FOR SEQ ID NO: 4808:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 118 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4808:

TGCTTACATC ATTAGCTAAT TGAGCACATG TTGCCATTGC TTGCAGCTAA ATTACCTTGC 60  
 ATCATTGCTA GCTTTTCTTG TATTAAGTGA TAnTTACTAA TTGGTTTGCC GAATTGCT 118

## (2) INFORMATION FOR SEQ ID NO: 4809:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 150 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4809:

TTGAGGTAGC CTAAAGCTAT TTCGGAGAGA CCAGCTATCT CCAGGTTTGA TTGGAATTTC 60  
 TCCnATACCT CAGTTCATCC GCTCACTTTC AACGTAAGTC GGTTCCGGTCC TCATCAGTGG 120  
 TACCTGACTT CAACTGACCA GGGTAGACAC 150

## (2) INFORMATION FOR SEQ ID NO: 4810:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 107 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4810:

AAGAAGGCGA CGATACATTA TCACCTGGTG TAACAATTAG TACGTGTATA TATCGTTCAh 60  
 AACCGTAAAT TCATGTTGGT GATAAGATGT GTGGTGGACA TGGTACA 107

## (2) INFORMATION FOR SEQ ID NO: 4811:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 117 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear



(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4811:

AGAGTGrATT AGGTATGAA GGTGGCCAAA ATAGGGTAAC CAGTCATTCC AGGAAGACAC 60

5 AGAAGAAGAC AAACCTAAAT ATGAACCAAG GTGGCATATC GTAGATATCG ATTTCGA 117

(2) INFORMATION FOR SEQ ID NO: 4812:

(i) SEQUENCE CHARACTERISTICS:

- 10 (A) LENGTH: 123 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4812:

CTTTTATCCG TTGAACGATG GCCCTTCCAT GCGGAACCAC CCGATnACTA AATCCGCTTT 60

20 TCGACCCCTGC TCGACTTGTA AGTCTGCAA TCAAGTCCCT TATGCCCTTA CACTCTATGA 120

ATG 123

(2) INFORMATION FOR SEQ ID NO: 4813:

(i) SEQUENCE CHARACTERISTICS:

- 25 (A) LENGTH: 106 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4813:

35 TAACCCGAGA GGGTCCCCtn GTCCAAACAG TGCTCTACCT CCAATATCAT CACTTGAGGC 60

TAGCCCTAAA GCTATTTCCG AGAGAACCAG CTATCTCCAG GTTCGA 106

(2) INFORMATION FOR SEQ ID NO: 4814:

(i) SEQUENCE CHARACTERISTICS:

- 40 (A) LENGTH: 112 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4814:

CTATTGCTTT AGATGCATAT GAATCATIGA nTGACGCGAT GCCGATGATT TCTGAACACG 60

50 GAATCGCGAA CGITGGCCAA CTGCCAACGA TTGGCGTGGG AATCATCCAG TG 112

(2) INFORMATION FOR SEQ ID NO: 4815:

55

(A) LENGTH: 125 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4815:

10 ACGTGGAGAG CATGTCCGTT CAAGCAGAGG GCGGCGGTT GAACCCGTCA TTCTGCACCA 60  
 TTTATTCTTA CATATTGCCG GCTAGACTCA ATTGGTAGAG CAACTGACCT TGTAACTAGT 120  
 AGGTT 125

15 (2) INFORMATION FOR SEQ ID NO: 4816:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 104 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4816:

25 GTGCTGGCGC AGTTGCGATG GTTATTGCAC ATAATCCAAG CATGGCATT AATGAAGATG 60  
 CTGTTGCTTA CACTGAAGAC GTTTATGnTT TCTGGCGTCC AACT 104

30 (2) INFORMATION FOR SEQ ID NO: 4817:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 117 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4817:

40 GTCGGGTAAG TTCGCGCCCG CACGAAAGGC GTAACGATT GGGCACTGTC TCAACGnGAG 60  
 ACTCGGTGAA ATCATAGTAC CTGTGAAGAT GCAGGTTACC CGCGGCAGGG CGGAAAG 117

45 (2) INFORMATION FOR SEQ ID NO: 4818:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 121 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

50

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4818:

55

TCGCTTACTC ATTTAGCTCT ACTAAACTCG TTGACGCTCT TTCTCGnTT CGTCAGATTC 120

A 121

5 (2) INFORMATION FOR SEQ ID NO: 4819:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 118 base pairs

(B) TYPE: nucleic acid

10 (C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4819:

15 TCAGTTCGGT ATTGTGAGTC TGCAACTCGA CTGACATGAA GCTGGAATCG CTAGTAATCG 60

TAGATCAGCA TGCTACGGTG AATACGTTCC CGGGTCTTGT ACACAACGCC CGThAAGA 118

20 (2) INFORMATION FOR SEQ ID NO: 4820:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 104 base pairs

(B) TYPE: nucleic acid

25 (C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4820:

30 CAAACAGTGC TCTACCTACA ATAATCATCA CTTGAGGCTA GCCCTAAAGC TATTTCGGAG 60

AGAACCAGCT ATCThCAGST TCGATTGGAA TTTCTCGGCT ACCC 104

35 (2) INFORMATION FOR SEQ ID NO: 4821:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 165 base pairs

(B) TYPE: nucleic acid

40 (C) STRANDEDNESS: double

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4821:

45 TCGTAGTGGT TTCCAACCAA GTTTTTATAA GTCAAACGCT CACATACGGC TTCGTTTTCA 60

TTATTTTAAA TGCTCATTTA CATAGThAAC TCGCTTTAAA ATAATTTTAA TCATGTCGCT 120

AACGTTTTCT TTTATAAAAG TTAAACGGTT TTATCTGTGG TGTCT 165

50 (2) INFORMATION FOR SEQ ID NO: 4822:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 113 base pairs

55

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4822:

GAGTTTGATC CGGGCTCAGG ATGAACGCTG GCGGCGTGCC TAATACATGG CAATCGAGCG 60

10

AACGGACGAG AAGCTTTGCTT CnCTGAGGTA GCGGCGGACG GGTGAGTAAC ACG 113

(2) INFORMATION FOR SEQ ID NO: 4823:

(i) SEQUENCE CHARACTERISTICS:

15

(A) LENGTH: 106 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4823:

CCGGCAACGT TCTACTCTAG CGGAACGTAA GTTGGCTACC ATCGACGCTA AGAACCTTTC 60

25

TTTGAnTTGT GACAATCGCT TGCTTCTTTC CTCTTCTTCG GCTCTC 106

(2) INFORMATION FOR SEQ ID NO: 4824:

(i) SEQUENCE CHARACTERISTICS:

30

(A) LENGTH: 108 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4824:

TAAACGGCGG CCGTAACATAT AACGGTCCTA AGGTAGCGAA ATTCCCTGTC GGGTAAAGTTC 60

40

CGACCCGCAC GAAAGGCGTA ACGATTGGG CACTGTCTCA ACTAGAGn 108

(2) INFORMATION FOR SEQ ID NO: 4825:

(i) SEQUENCE CHARACTERISTICS:

45

(A) LENGTH: 116 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

50

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4825:

TCTAGTGACC GATAGTGAAC CAGTACCGTG AGGATAAGGT GAAAAGCACC CCGGAAGTAG 60

nTGTAAATAG AACCTGAAAC CGTGTGCTTA CAAGTAGTCA GAGCCCGGTA ATGGGT 116

55

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 160 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4826:

ATAATATTGT AAATTAATCC ATTGATGCCA CAAGTGCCGG ACCAGAAATG ATGGTATTTA 60  
 ATAATGTGCC ATCTTTATCT TTACGCCAAT CATAATTGGT AAAAATTCCT CCTTCTAATA 120  
 ATCCTTGAT TGCCTGTCAT AnAGTCTTTG CTCCTTGCAC 160

(2) INFORMATION FOR SEQ ID NO: 4827:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 115 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4827:

CGCATTGAGA CCGCAAGCTC TTTTTTTTAT GTCTAAAACG TCAAAATAAA AAGTAAACAC 60  
 AAGAAAAATG GTTGCCnAG TGAACGCTT TGAATCTGAC GAAACGAGAA AGAGC 115

(2) INFORMATION FOR SEQ ID NO: 4828:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 103 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4828:

CCAAAATAGC CTTCATAATC CAAAACAGG CTCCTTTGAC TATAGATTTT CGTTTCTGGT 60  
 TCAGAAAGCT TTTGATTAAC TTAAAGTAT nCCCAATTAT AAT 103

(2) INFORMATION FOR SEQ ID NO: 4829:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 111 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

GGACCGAACT GTCTCAGCAC GTTCTnAAC CATCTGCGT ACCGCTTTAA TGGGCGAACA 60  
 GCGAACCCCTT GGGACCGACT ACAGCCCCAT GATGCGATGA GCCGACATCG A 111

5 (2) INFORMATION FOR SEQ ID NO: 4830:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 105 base pairs  
 (B) TYPE: nucleic acid  
 10 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4830:

15 GTTGTGTGGGG CCCCGCCGGC AAGGTGACT AGAATTGAGA AAAGCTTGTT ACAACGCTAT 60  
 TTTCGTTTCTAG TCAACnACTG CCAATATAAC TTTGTAGAGC ATTGA 105

20 (2) INFORMATION FOR SEQ ID NO: 4831:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 102 base pairs  
 (B) TYPE: nucleic acid  
 25 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4831:

30 ACATTGAGTC TTGAGTCGT TGCATTTCAC ACTGCCGnGA AAAGCCTCTA GATAGAAAAT 60  
 AGGTGCCCGT ACGCAAACC GACACAGSTA GTCAAGATGA GA 102

35 (2) INFORMATION FOR SEQ ID NO: 4832:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 107 base pairs  
 (B) TYPE: nucleic acid  
 40 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4832:

45 TnTnTAGAATG AACGGGCGAG TTACGATTG ATGCAAGGTT AAGCAGTAAA TGTGGAGCCG 60  
 TAGCGATAAG GAGGTCTGAA TAGGGGGTIT AGTATTTGTT CGTAGCC 107

50 (2) INFORMATION FOR SEQ ID NO: 4833:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 144 base pairs  
 (B) TYPE: nucleic acid  
 55 (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4833:

TGCAACTAAT GAAAAGTAGA GTTCGGGGA GTTAAACCA GTGACTGTG ACCTGTGTG 60  
 CTCCATTGGA ATGTACTACC TGATGCAAGA TAATTATCAT CACTTTGTG ACGTGCTTnA 120  
 TTTTCAGCAT CAATTGATC AATC 144

(2) INFORMATION FOR SEQ ID NO: 4834:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 108 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4834:

GGCTCAGATG nACGTGGCG CGTGCCTAA TACATGCAAG TCGAGCGAAC GGACCAGAA 60  
 GCTTGCTTCT CTGGATGTTA GCGCGGACG GGTGTAGTAA CAGTGGG 108

(2) INFORMATION FOR SEQ ID NO: 4835:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 102 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4835:

GACAATGGTA GgnGAGCGTT CTAAGGCGT TGAAGCATGA TCGTAAGGAC ATGTGGAGCG 60  
 CTTAGAAGTG AGAATGCCGG TGTGAGTAGC GAAAGACGCA GT 102

(2) INFORMATION FOR SEQ ID NO: 4836:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 109 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4836:

TTGCAGACTA CAATCCGGAA CTGGAGTAAC AACTTTATGG GATTIGnCTT GACCTCGCGG 60  
 TTTCGTGGC CCTTTGGTAT TGTCATTGT AGCACGTGTG TAGCCCAAA 109

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 103 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4837:

CTCCACGTAA GCTAGCGCTC ACGTTTCAAA GGCTCCTACC TATCCTGGTA CAAGCTGTGC 60  
 CGGAATTCCA ATTTGCAnC TACAGTAAAG CTCACGGGG GTC 103

(2) INFORMATION FOR SEQ ID NO: 4838:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 121 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4838:

TCAAACACTC nCATACTGCT TTATTTTCAT AAACAATATC ACTTTAACCA AAAAATATTT 60  
 GAATGTAA TAAACATTCA AAACCTGAATA CAATATGTCA CGTTATTCCA CATCTTCTGG 120

A 121

(2) INFORMATION FOR SEQ ID NO: 4839:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 104 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4839:

AAACCATGAA TTAAGAATCC AGAAACAGGA GATGTAGTTA GACCACCGGT CGATTAGCGT 60  
 ACCAAAATAT GGACCTGTAA AAGGAGACTC GATTGTAGAn AAAG 104

(2) INFORMATION FOR SEQ ID NO: 4840:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 127 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear



CCGTGGAGTT TATGTAGCCT GATATTGAAT TCGGCACAGT TGTACAGGTA GGTAGGAGCC 60  
 TTGAAACGTG AGCGCTATTA GTGnAGGCGT GGTGGTACT ACCCTAGCTG TGTGGCTTT 120  
 CTAACCC 127

## (2) INFORMATION FOR SEQ ID NO: 4841:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 125 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4841:

CATCCACCCC CGGGCAAGGT TGAAGTAAT TGGAAAAAA CTGGTTACA ACGTATTTT 60  
 CATTCACTCA ACTACTGCCA ATATAATATT GAAAACTATA GGACATTAT TAGTGTTC A 120  
 GTTCT 125

## (2) INFORMATION FOR SEQ ID NO: 4842:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 108 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4842:

TGGTACGGCA TCTACCCGT CTTCGCTAC TCACACGGC ATTCTCACTT CTAnGGCGTCC 60  
 CACATGATCC TTACGATCAT GACTTCAACG CCCTTAGAAC GCTCGTCC 108

## (2) INFORMATION FOR SEQ ID NO: 4843:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 108 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4843:

TAATGAAGGT CTTCGGATCG TAAACTCTG TTATTAAGHA GGAACATGTG TGTAAGTAGC 60  
 TGTGCATAC TTGACGGTAC CTAATCAGAA AGCCACGGCT AACTACGT 108

## (2) INFORMATION FOR SEQ ID NO: 4844:

(A) LENGTH: 117 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4844:

CGGTCTCAAT GGGCTCATC GCATCCATTT TTGACCTGG GCAACGTTCT ACTCTAGCGG 60  
 AACCTAAGTT GGGCTACCAT CGAGcNCTAA GAACCTTTCT TGACTTGTTG ACAATCG 117

(2) INFORMATION FOR SEQ ID NO: 4845:

15

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 108 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4845:

GACTGTTTAT CAAAAACACA GTCTCTGCT AAACCGTAAG TGATGTATAG GGGGCTGACG 60  
 CCTGnCCGGG TTCTGSTAAG GTTAAGAGGA GTGGTTAGCT TCTGCGAA 108

(2) INFORMATION FOR SEQ ID NO: 4846:

30

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 118 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4846:

CAATATTGA AGCGATTGGC TTGTCTCATG ATGTGATTGA TCGTTATTTT ACTGGGACAC 60  
 AGTCTAAGTT ATCTGSTAT TCGATTGATC AAATThTgCC TGA AAAAGAC GCACAAGT 118

(2) INFORMATION FOR SEQ ID NO: 4847:

45

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 104 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

50

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4847:

GATCCCCGGA CGAGTGCTT AATGCGTTAC TGACAGCACT AAGGGGCGGA AACCCCCCTAA 60

55

## (2) INFORMATION FOR SEQ ID NO: 4848:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 137 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4848:

CTGGCGATTG TGCTCTGTAA CGTGCTTCCC AATTGGAAC GCACGTGnCC CTGCCCCATAC 60  
 CTACGGGACT TGACTTATAT TGTITGGCTT TGTACGTCAT TTCAACAATA GACGCCCATG 120  
 CCAGCAACGC GATTACC 137

## (2) INFORMATION FOR SEQ ID NO: 4849:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 116 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4849:

GTTTAGGCTC ATCTTAAGAT GTTAGGTCCA CTCGGTTTAC ACCATATTTT TTACTTACCG 60  
 TTTTGGCAGA CGGCACTTGG TGTACTTITA GAAGTCAAAG ACAnGGGGGG GGGGGG 116

## (2) INFORMATION FOR SEQ ID NO: 4850:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 125 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4850:

TCGTTTCGTG ACGGGCTCGG TAACTTACCC GACAAGGTAA TTTCGCTACC TTAGGnACCG 60  
 TTATAGTTAC GGTTCGCCGT TTACTGGGGC TTCGATTTCG ATCTTCGCAG CTATATCTCA 120  
 CTCCT 125

## (2) INFORMATION FOR SEQ ID NO: 4851:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 96 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4851:

5 AAGTTGTATT TTAAAAATAG TTCTTTAAAT TATATACCCA CCACATTGG TGGGAGAACC 60  
 TAAAAAAG CACTTTCCCC AAAAATGGGA AAGTGC 96

(2) INFORMATION FOR SEQ ID NO: 4852:

10 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 100 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4852:

20 ACCGTGTGCT TACAAGTAGT CAGAGCCCGT TAATGGGTGA TGGCGTGCCT TTTGTAGnAT 60  
 GAACCGGCGA GTTCACGATT TAGATGCAAG GTTGAAGCAG 100

(2) INFORMATION FOR SEQ ID NO: 4853:

25 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 101 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 30

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4853:

35 CCGACAGCGT AGnCGATGGA TAACAGGTTG ATATTCCTGG TACCACCTAT AATCGTITTTA 60  
 ATCGATGGGG GACCCATAGG ATAGCGAACC TGGGATTGGA T 101

(2) INFORMATION FOR SEQ ID NO: 4854:

40 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 102 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear  
 45

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4854:

GGACATCTCC TAAGGCTAAA TACTCTCTAG TGACCGTAGT GAACCAGACC GTGAGGAAAG 60  
 50 GTGAAAnACC CCGGAGGGGA GTGAATAGAC CTGAAACCGT GT 102

(2) INFORMATION FOR SEQ ID NO: 4855:

55

(A) LENGTH: 104 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4855:

10 ATACCGCAA TTGCGGAAAT CTCATCTTGA GGGGGGCTTC ATGCTTAGAT GCTTCAGCA 60  
 CTTATCCGCT CCACACATAn CTACCCAGCT ATGCCGTTGG CAGC 104

(2) INFORMATION FOR SEQ ID NO: 4856:

15 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 138 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4856:

CTACTGCTCTT CATTCTTTCA GTCTTTTTT ACGGGTCTGT TTTCTAATTT GAGCACATCT 60  
 25 TCGATTCCTTT ATCAAATGAC TACCAATTAA ATCTATTCTCT CThTGGTAAA TCGCTAACTC 120  
 CATCTCCTTA ACCCGGTA 138

(2) INFORMATION FOR SEQ ID NO: 4857:

30 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 100 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4857:

40 TCAAACGnTT GTCATCTATT AAAGAAGTAG GTCTAGATAT ATCAGGTACG TAATGTGTAA 60  
 TGGATGGGCGC TATTGCTTTA GGTCAATCCAT TAGGTGCTAC 100

(2) INFORMATION FOR SEQ ID NO: 4858:

45 (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 106 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

50

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4858:

55

CCTGTGTGTT TGATAAACAG TCGGTGGGC CTATTCAGT CGGCTT

106

(2) INFORMATION FOR SEQ ID NO: 4859:

5

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 152 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

10

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4859:

15

GTAACGCGCC GGTTCATTCT ACAAAGGGC ACGCCAATCA CCCATTAAAG GGCCTCTGAA

60

CTACTGTGTT AGCAACACGG TTTCAGGT TCTATTCCA CTCCCCCTT CCGGGGTnGC

120

TTTTCAACC TTTTCCCCC TCCACGGTTA CT

152

20

(2) INFORMATION FOR SEQ ID NO: 4860:

25

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 100 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4860:

30

GCCCCGTACCG CAAACCGACA CAGGTAGTCA AGATGAGAA TTCTAAGGTG AGCGAGCGAA

60

CTCTCGTTAA GGAACGCGC AAAGTACCCC CGTCACTTCG

100

35

(2) INFORMATION FOR SEQ ID NO: 4861:

40

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 104 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4861:

45

CAGGTAACAC TGAATGGAG ACCGAACCGA CTTACGTTAA AAAGTAAGCG GATGAACATA

60

AGGTAGCnGA GAAATTCCAA TCGAACCTGG AGATAGCTGG TTCT

104

(2) INFORMATION FOR SEQ ID NO: 4862:

50

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 87 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double

55

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4862:

TTACTTATCT AGTTTCAAT GTACAAATAA TGGTGGAGAC TAGCGGGATC GAACCGCTGA 60  
 CCTCCTGCGT GCAAAGCAGG CGCTCTG 87

(2) INFORMATION FOR SEQ ID NO: 4863:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 105 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4863:

ACCGTTTGAT TTCTTATCTA ATTCAAGCTT ATTTAAACT CTTTATTCAC TCGGTTTTG 60  
 CTGTGTAATA TCTATATTTT ACTTACTTAT CTATTTTCA ATGTA 105

(2) INFORMATION FOR SEQ ID NO: 4864:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 129 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4864:

AGGGAATCGA ATTTTCTTTC TCTTCCTCCG GGGTACTAAG ATGTTTCAGT TCTCCGGGTG 60  
 TGCCTTGCTG GATGATGCTA TGATATTGCA CATATCGAAT CAACAGTGGT GCATGAACCT 120  
 GCATGGCT 129

(2) INFORMATION FOR SEQ ID NO: 4865:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 100 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4865:

AAACCGCAAG GTCAAGCAAA TCCCATAAAG TTGTTCTCAG TCGGATTGT AGTCTGCAAC 60  
 TCGACTACnT GAAGCTGGAA ATCGCTATAA ATCGTAGATC 100

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 115 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4866:

GTGATAAGAT TAGCAGAAAA TGGATGGTGT TAAGAGAGTT AATTGGTTTG GnGGTATGCT 60  
 TATTTTAAAT GGCATTGTGT ACGAGAGCAT TAGAGTTTGT ACTTGTGAGG TTATT 115

(2) INFORMATION FOR SEQ ID NO: 4867:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 90 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4867:

ACACCACTCC TCATTAACTT TCCAGCACCG CAGCAGCGCT CACCCCTATA CATCACCTTA 60  
 CGGTTTAGCA GAGACCTGTG TTTTGTATAA 90

(2) INFORMATION FOR SEQ ID NO: 4868:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 87 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4868:

CACGAACGAT TGTCTTGCCT GCGGGGATTA TCTGACACGG TACCGGTCAA ACAGTGAATC 60  
 GCTACTGCTC ATCAGGGATT ACAAACC 87

(2) INFORMATION FOR SEQ ID NO: 4869:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 165 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4869:



CGCTCACCTT AGAATCTATT TACACTGGTG TTGGTAGGCA CTTTTTCAA GCTTCCGATT 120  
 AATACATGAA AAGCTTCCAA AGTACTAGGA CGTTCAATAC ATGTA 165

5 (2) INFORMATION FOR SEQ ID NO: 4870:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 111 base pairs  
 (B) TYPE: nucleic acid  
 10 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4870:

15 AATATCATTT ATAACATTAA GTAATAACTT TTTTATCTT GTCCATTITA TTTTnAACCC 60  
 AAAATTGAT TAAAAAATCG CCTGGCAACG TTCTACTCTA GCGGAACTAA G 111

20 (2) INFORMATION FOR SEQ ID NO: 4871:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 84 base pairs  
 (B) TYPE: nucleic acid  
 25 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4871:

30 TAGCAGAGAC CTGTGTTTTT TGATAAACAG TCGCTGGGC CTATTCACCTG CGGCTCTTCT 60  
 GGGCGTTAAC CCTAAAGAGC ACCC 84

35 (2) INFORMATION FOR SEQ ID NO: 4872:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 101 base pairs  
 (B) TYPE: nucleic acid  
 40 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4872:

45 ACAGTAAAGC TCCACGGGTC TTTCGTCCT GTCGCGGTA ACTGCATCTT CACAGGTACT 60  
 ATGATTTTCA CGATCTCTCn ATGAACAGTG CCAATCGTA C 101

50 (2) INFORMATION FOR SEQ ID NO: 4873:

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 87 base pairs  
 (B) TYPE: nucleic acid  
 55 (C) STRANDEDNESS: double

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4873:

5 GACAGGCGTA GCGATGGAT AACAGGTTGT ATTCTGTAC CACCTATGAT CGTTTAAATC 60  
GATGGGGGA AGCATAGGAT AGGCGAA 87

(2) INFORMATION FOR SEQ ID NO: 4874:

10 (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 81 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4874:

20 GGGAGAGCGC CTGCTTTGCA CGCAGGAGGT CAGCGGTTG ATCCCGCTAG TCTCCACCAT 60  
TATTTGTACA TTGAAACTA G 81

(2) INFORMATION FOR SEQ ID NO: 4875:

25 (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 81 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4875:

30 TATGTTTGA AATATCTTTA TCACTCTAAA ATGATATACA AGAAATCCAA GAAAAATAAG 60  
35 CGAACTGAAT AAATAAGAT T 81

(2) INFORMATION FOR SEQ ID NO: 4876:

40 (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 87 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4876:

45 AACGCGITAA ATCTTTTAT AAAAGACGTA ACTTCATGTT AACGTTGCTT ATAAAAATGG 60  
50 TGGAAACATAG ATTAAGTTAT TAAGGGC 87

(2) INFORMATION FOR SEQ ID NO: 4877:

55

(A) LENGTH: 101 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4877:

10 ACAACGGATA AAAGCTACCC CGGGGATAAC AGGCTTATCT CCCCCAAGAG TTCACATCGA 60  
 CGGGGAGGTT TGnCTCAAT GTGCTCATC GGATCTTGGG G 101

(2) INFORMATION FOR SEQ ID NO: 4878:

15

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 79 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4878:

25 ATTTATTAGG TGTACAAATG ACCACCGCAT CAACAAGTTT AAACAGCTCG CTAGGTGTCT 60  
 CAACTGCATG AGGTATATT 79

(2) INFORMATION FOR SEQ ID NO: 4879:

30

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 83 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4879:

40 ACATCGTTTC AATGGGTCGC TAACGCTGCT AGGACATTAT AACAGACGTG TACAAAAAGA 60  
 AAATTGGTAT GGTAATTGTG GCA 83

(2) INFORMATION FOR SEQ ID NO: 4880:

45

(i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 84 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

50

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4880:

55 CTTTCATCTG ATCCAGATCA AACTCTCCAT AAAAATTATG ATGTTTGATT AGTCATAAA 60

## (2) INFORMATION FOR SEQ ID NO: 4881:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 80 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4881:

TTGTGCAGTT GCATGCCAT TGATCAATA CACGTTGAGC TGCAGTTATT TCAGTTTCTG 60  
 CTTCAAGCTT CTTGCGATTA 80

## (2) INFORMATION FOR SEQ ID NO: 4882:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 86 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4882:

TCTGATGTA AAGCCACGG CTCAACCGTG GAGGTCATT GGAACTGGA AAAGTTGAGT 60  
 GCAGAAGAGG AAAGTGGGTT CCATGT 86

## (2) INFORMATION FOR SEQ ID NO: 4883:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 127 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4883:

TGATGCGATA TCTACGCAAC ATCGGCATAA GTnTGATGAC AAACAAGCTT CCATGACAAA 60  
 AGTAATGGAC GAATATCGCA TTTGGGGAAA GTCCTCTAAA AATGCCTTTT GAAGGAACGT 120  
 CGGTTAA 127

## (2) INFORMATION FOR SEQ ID NO: 4884:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 78 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4884:

AGTAGGAATC GAACCCACAC CAAAGTTTIG GAGACCTCTA TTCTACCTTG AACTATGCCC 60  
 CTATTAATAA TAATAAAT 78

(2) INFORMATION FOR SEQ ID NO: 4885:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 84 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4885:

CTCACTATTC GAGTGACACT GCGCCGAAAA TGTACCGGGG CTAACATAT TACCGAAGCT 60  
 GTGGATTGTC CTTTGGAAAT GGGT 84

(2) INFORMATION FOR SEQ ID NO: 4886:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 117 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4886:

GGTATCTGTT CACTCTTCCG GTGGTGAGT TCGACCAAC AATGGGTTGG AGATTGGATT 60  
 TCATCCTTCT CAATTAATCG TTGCCGTACT TTCAAnTGG TACCCCATCC AAAAGGG 117

(2) INFORMATION FOR SEQ ID NO: 4887:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 80 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: double  
 (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4887:

CGGATCTGGG AGGAAATCTC CTAAGGCTAA ATACTCTCTA GTGACCGATA GTGAACCACT 60  
 ACCGTGAGGA AAGGTGAAAA 80

(2) INFORMATION FOR SEQ ID NO: 4888:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 77 base pairs

(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4888:

AATATGCAAG CACATGGTGA ATATGACGAG GTTGCAACTT CAACGGCGAA GATGATGGAA 60

10

GGCCTTACGT TTGCGTG 77

(2) INFORMATION FOR SEQ ID NO: 4889:

(i) SEQUENCE CHARACTERISTICS:

15

(A) LENGTH: 76 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4889:

TCTCTGGGC GTTAACCCTA AAGAGCACCC CTTCGCCGA GTTACGGGGT CTTTGCCGA 60

25

GTTCCTTAAC GAGAGT 76

(2) INFORMATION FOR SEQ ID NO: 4890:

(i) SEQUENCE CHARACTERISTICS:

30

(A) LENGTH: 117 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

35

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4890:

GTGGGGGCCC CAACATAGGA GCTGATTTC TGTCAGCTTA CCATATGTG GCAAGTTGGC 60

40

GGGGGCCCC AAACCAAGGA GCTGGCTTTC TGTCACCTTA CCATTAATGT GGCAAGT 117

(2) INFORMATION FOR SEQ ID NO: 4891:

(i) SEQUENCE CHARACTERISTICS:

45

(A) LENGTH: 109 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: double  
(D) TOPOLOGY: linear

50

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4891:

TTAATCnCC TGCATATGAT GACTTTGTTG AACCGTCATT GCATACTTTC AACATGAATA 60

55

CGTGAAACAC CTTCACCTTAC TGCATATCTT AGTTCCTCGG TCTGTCTTA 109